

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

I.—OBITUARY NOTICE.

IAN GALLIE

IAN GALLIE was born on December 12th, 1907, in Glasgow. He was the second of a family of four brothers, sons of Walter S. Gallie and his wife Alice *née* Wormald. The father was a very able Scottish businessman who built up an important engineering firm in Glasgow; the mother was a gifted Englishwoman from Yorkshire, whose family had for long been connected with the wool trade. Both parents predeceased him, but not before he had completed his university education and was launched on his career in life. He inherited from both sides a very clear head, the power of working hard and efficiently, and considerable business ability. He was greatly devoted to his mother and was plainly much influenced by her. They had taken several long foreign tours together while he was an undergraduate at Oxford. Her illness and death at a comparatively early age came as a great blow to him at a time when his own health was far from good.

Gallie was educated first at a preparatory school at Kirkby Lonsdale and then at Sedbergh, where he specialised in classics. From Sedbergh he went to Exeter College, Oxford, in 1926, as an entrance scholar. He obtained a first class in Honours Moderations in 1928 and in Literae Humaniores in 1930. In 1927 he was *proxime accessit* for the Gaisford Greek Prize, and in 1929 he won it for a translation of Book VI, Chapter XI, of the Memoirs of Philippe de Commynes into Greek after the manner of Herodotus.

From October 1930 to July 1931 he held a temporary post as Tutor in Philosophy at Jesus College, Oxford. He was appointed Fellow and Tutor of Wadham early in 1931, and was given leave of absence to study before taking up his duties. During that period he spent a long vacation in Germany and the first two terms of the academic year in Cambridge. While in Cambridge he was made a member of the High Table of Trinity College and became *persona grata* with all those who made his acquaintance there. Some time after his return to Wadham he was made Dean of College, a post which was far from being a sinecure in view of the spirited character of the undergraduates and the absence from College of most of his colleagues at week-ends. He was an excellent teacher, who readily got on friendly terms with undergraduates without loss of authority, and

he performed his decanal duties admirably. During part of this period his younger brother, Bryce, was an undergraduate at Balliol; and, as they were exceptionally good friends, this was a happy circumstance for both of them.

Even as an undergraduate Gallie had been subject to occasional mysterious spells of ill-health and bodily pain. In 1938 he became seriously ill, and from that year until 1942 he was compelled to desist from academic and all other work. He resigned his fellowship at Wadham in 1941. In 1942 he began to work again as a Principal, first at the War Office and then in the Control Office for Germany. He was apparently in fair health throughout 1943, 1944 and the first half of 1945. But his complaint, which was eventually diagnosed as Hodgkin's disease, was growing upon him; and it, and the after-effects of the treatment for it, caused him terrible discomfort and weakness. These he bore with a degree of fortitude and self-control which may fairly be called heroic. His powers of thinking and expressing his thoughts clearly and cogently in writing remained with him to the last, as is plain from the excellent paper on *Intelligence and Intelligent Conduct* which he wrote under appalling difficulties for the Aristotelian Society in the last months of his life. He died on April 5th, 1948.

Gallie married in 1940 Miss Elsie W. Peers, and they had one child, a boy. He owed much to the care and attention of his wife during his long and trying illness.

Gallie had in him the makings of a first-rate philosopher, and nothing but ill-health prevented him from establishing a high reputation among contemporary thinkers. He had great acuteness, together with good sense, balance, and complete intellectual integrity. He was not easily contented with his own or other men's answers to philosophical problems, and he would return again and again with the utmost pertinacity to the attack. In consequence of these qualities he worked rather slowly; but, when he had made up his mind for the time being, he had the power of expressing his arguments and his conclusions with admirable clarity. He had published little, but what little there was is of excellent quality. Apart from the recent paper to the Aristotelian Society, mentioned above, his main publications were "Oxford Moralists" in *Philosophy*, "Is the Self a Substance?" in *MIND*, Vol. XLV, and "Mental Facts" in the Aristotelian Society's *Proceedings* for 1937. In his last years he had become greatly interested in ethical theory and particularly in the ethics of Aristotle. I do not know whether he has left anything on these topics in a state fit for publication.

I suppose that I must have known Ian Gallie as well as, or better than, I have known anyone else. I felt a deep affection for him, but I am not singular in thinking that he was an exceptionally attractive and lovable person. He was admittedly 'difficult' during the period from 1938 to 1942, when his bodily illness (not then diagnosed by the doctors nor fully realised by his friends) was affecting his nerves. Happily, although his physical condition grew worse, the nervous cloud lifted towards the end of 1942. For the rest of his life he was his old lovable self, and one's affection for him was qualified only by sorrow for his sufferings and admiration for the strength of mind with which he bore them and triumphed over them.

C. D. BROAD.

II.—NOTE ON THE NEW EDITION OF PROFESSOR AYER'S *Language, Truth and Logic*.

BY JOHN WISDOM.

1. CHAPTER I of *Language Truth and Logic* is called "The Elimination of Metaphysics" and is concerned with "verifiability as a criterion for testing the significance of putative statements of fact" (p. 35). On page 41 a metaphysical statement is defined as one "which purports to express a genuine proposition but does, in fact, express neither a tautology nor an empirical hypothesis". In Chapter II it is claimed that the function of philosophy is analysis, not the "*a priori* justification of our scientific or common sense assumptions", although "the task of defining rationality is precisely the sort of task which it is the business of philosophy to undertake" (p. 50). This last remark is, in my opinion, excellent though (1) the word "defining" suggests that only a definition will do and (2) the definition of rationality is represented as just one among other definitions which it is the business of philosophy to provide. As to (1) see below. As to (2) a consideration of the principle that the meaning of a statement is the method of its verification will lead us to grasp that epistemology—puzzles of the form "Do we really know?", "How do we really know?"—and ontology—puzzles of the form "What is it that we claim to know?"—are one. Consequently the problem "What is rationality?", like the problems "What is a statement?", "What is a universal or predicate?", "What is meaning?", "What is understanding?", is involved in every philosophical problem and is consequently involved twice over in itself. Thus we ask "What is the meaning of 'meaning'?", "What reasons are there for saying that a procedure is rational?"

2. The problem of induction is, surely, the problem "Are inductive reasons really reasons?". It isn't "the problem of finding a way to prove that certain empirical generalizations which are derived from past experience will hold good also in the future" (p. 49). That is a matter for the scientists. The problem of induction is a typical metaphysical problem. Mr. Ayer is out to show that such problems are, as ordinarily conceived not genuine, and as transfigured logical.

What is it to have reason for a scientific conclusion? Mr. Ayer's words in answer are a little confusing. One might for

a moment suppose that he is saying (p. 50) that "the only test to which a form of scientific procedure which satisfies the necessary condition of self consistency is subject, is the test of its success in practice". This might be said in metaphysics and be an illuminating paradox. But as a tautological account of what a rational, good, scientific procedure is it is as false as saying that the goodness of a pointer—the dog I mean—is a matter of his success in practice. The future, in a metaphysically extended sense of 'the future', is the only test of the truth of a scientific conclusion. But not even in this extended sense is it the test of the *propriety* of a procedure although, as with the dog's success, and his excellence, it is not so entirely disconnected with this as one pre-occupied with "points" might pretend. And Ayer is aware that success is not enough. For he writes (p. 50) "being rational entails being guided in a particular fashion by past experience". If we ask "In what fashion?", the only correct and complete answer in general terms is "A scientific fashion". As a platitude in metaphysics introducing or summarizing an explanation by samples and paradoxes this could be valuable. But by itself it's worth little.

3. On page 52 Ayer makes the important historical claim that Locke, Berkeley and Hume were not metaphysicians but were really analysts. They were not fully aware of this and half conceived themselves to be examining our fundamental assumptions about what is in the world. But really they were analysts. That I venture to insist is what Ayer wants to say really though of course he doesn't use the adverb 'really'. Isn't his whole book written against that adverb? We were very nervous of it in 1935.

Part of what Ayer means by saying that Locke, Berkeley and Hume were not metaphysicians is that they did not talk in what one may call "the transcendental way", that is, they, or at least Hume, did not talk of, for example, physical things or the self as if they were realities over and above the appearances which are our evidences for them, as if they were related to their manifestations as a thing to its shadows. Is this true of Berkeley about the self? Is it altogether true of Berkeley about material things? I am not going to argue these matters here. For my point is that there is a great deal in what Ayer says about Locke, Berkeley and Hume and that nevertheless they and Kant too were concerned with "the systematic study of the ultimate nature of reality" (MacTaggart's definition of metaphysics), with what things really are and whether and how we really know them. What it has taken us a long time to

grasp is that the metaphysical enquiries put in these words are so very different from ordinary enquiries which may be put in the same words. We ask, for example, what certain suspicious looking objects really are, who is really responsible for the robberies, whether Jones who claims to know the answer really knows the answer and if so how. What it has taken us a long time to grasp is that metaphysical questions which sound so matter of fact aren't but are more like questions of logical analysis and may be called questions of analysis if we don't insist that there can't be analysis without definition. Perhaps the better way is to say that there can be philosophy without analysis. When he wrote his book Ayer wasn't clear about how there can be philosophy without analysis or, if you like, analysis without definition. In the introduction he is clearer but even there he isn't fully aware, it seems to me, of the implications of the change, and this unawareness is an instance of doing philosophy as if it were science, not natural science of course but logical, mathematical, science. At the time he wrote *Language Truth and Logic* Ayer was like many of us over-fascinated by the definition model, exemplified in "that paradigm of philosophy, Russell's theory of descriptions". In this "theory" metaphysical puzzles were cleared up by finding and creating definitions. As Ayer says in his introduction (p. 24) there are philosophical puzzles that can be cleared up without seeking a definition. There are indeed. But the example he has chosen to drive home this point could hardly be worse. The example is that of those puzzles about the existence of what doesn't exist which Russell's theory of descriptions demolished. It is true that these puzzles *can* be cleared up without bothering about definitions but, as it happens, they are among the very few metaphysical puzzles which can be dealt with in a convenient and impressive way by definition. And the fact that they were thus cleared up by definition contributed to our assuming that metaphysical puzzles could not be cleared up without definition.

So it happens that Ayer represents Berkeley as saying, when purified of theism, that it is possible to define material things in terms of sense-contents (p. 53). And from Chapter III, "The Nature of Philosophical Analysis", we gather more of what sort of definition is contemplated when we gather that Berkeley's or, if you like, Hume's phenomenalism could have been put "Material things are logical constructions out of sense contents".

4. The first explanation of what this means is in the second paragraph of page 63 and is very liable to muddle people. There are places in philosophy where a lot of fuss about whether one

is saying "The symbol *S* has such and such features" or is saying "*S* has such and such features" is unnecessary. But, as Moore taught us, if there is a place where it is very necessary not to mix up these two things it is where one is explaining the peculiarities of logical constructions and at this place Ayer writes "When we speak of certain objects *b, c, d . . .* as being elements of an object *e*, and of *e* as being constituted by *b, c, d . . .* we are not saying that they form part of *e*, in the sense in which my arm is part of my body. . . . What we are saying is that all the sentences in which the symbol *e* occurs can be translated into sentences which do not contain *e* itself, or any symbol which is synonymous with *e*, but do contain symbols *b, c, d . . .* In such a case we say that *e* is a logical construction out of *b, c, d . . .*" What follows shows that Ayer means not that in such a case the symbol *e* is a logical construction out of the symbols *b, c, d* but that the object *e* is a logical construction out of the objects *b, c, d*. Unfortunately what precedes the words I have quoted, because it is concerned with the fact that symbols are logical constructions, may easily confuse the reader.

Ayer's symbolism too encourages a common misunderstanding. The average plumber is a logical construction out of Bert, Alf and so on. But of course these names do not occur in the translation of a sentence of the form "The average plumber . . .". What occurs in the translation is the general term 'plumbers'.

Another common misunderstanding which Ayer's exposition encourages is that of supposing that from the fact that expressions of the forms 'The *S*', 'Every *S*', 'Some *S*' can be 'defined in use' in the sense implied by the theory of descriptions it follows that *S*'s are logical constructions. But it is not the fact that sentences about the average plumber can be translated into sentences about the description 'the average plumber' that makes the average plumber a logical construction. What does this is the fact that sentences of the form "The average plumber has *P*" can be translated into sentences of the form "Plumbers have *P*" or, if you like, "The description 'is a plumber' has *P*".

5. But enough of this. We can now put things in a much simpler and more familiar way. For one of the best ways of saying that a material thing is a logical construction out of its appearances, sense-contents, sense-data, sensations or what not, is to say that a material thing is to these as the average plumber to plumbers, as a nation to its nationals, as energy to its manifestations, as the representative firm to firms, and *not* as a political representative to those he represents, not as an original

to its copies, not as a mechanism beneath a bonnet to its manifestations, not as a sheep to shadows on the grass. In a word—down Plato with his cave, up Hume with his faggot. Another paradigm or model for explaining the meaning of 'logical construction' is the following. If you and I now speak with each other about dragons, the Greek gods, or the persons to be met with in Lilliput or the pages of Dickens we decide which of us is right by looking up the manuscripts, indeed we are talking about what Dickens or the Greeks said. And the fact that we are using this convenient short hand is expressed by saying that the beings we speak of are logical constructions out of the stories told seriously or fantastically by others. The problem of what *they* were talking about cannot be solved by translation whether exact or rough.

It is easy to see the connexion between a thing's being a logical construction and the problem of how we know what we know of it. The engine of a car is not a logical construction from the car's performance—the car might perform wonderfully and have no engine. True, we can in a sense read the condition of the engine from the car's performance. But we cannot do this by deduction, by translation, only by experience, so that error is always imaginable. In contrast to this we can read off the features of the average plumber from those of plumbers by calculation, deduction, translation—come what may he can't frown while too many plumbers smile.

It is now to be understood then that in saying that X's are logical constructions out of Y's one does not claim that for every X-sentence an exact translation in terms of Y's can be found. The fact that one does not refer to so definite a relationship as has sometimes been supposed does not imply that whether one is right or not is not a definite question. Suppose we ask "Is the average carpenter a logical construction out of carpenters?" This means "Are sentences about the average carpenter related to sentences about carpenters as sentences about the average plumber to sentences about plumbers?" And the answer is definitely "Yes". Is "England to Englishmen as France to Frenchmen?" "Yes, of course." "Is England to Englishmen as the average plumber to plumbers?" "Not quite. But definitely near enough for us definitely to say that England is a logical construction out of Englishmen."

But I now submit that the question "Is a material thing related to its sense-contents as the average plumber to plumbers, as a nation to individuals?" has not a definite answer. It is a "difficult" question. And though this difficulty arises in

part from the *complexity* of the relevant considerations it arises also from their balance, that is from the *unsettleableness* of the question. The question has no answer because it isn't a question but a noise calculated to encourage us to look carefully and afresh at the pattern of the logical connexions between material things and sense-contents.

The question has no answer because profoundly valuable though it is to say that the relation between a material thing and its sense contents is analogous to the relation between the average plumber and plumbers, there is also profound reason to protest against this analogy and, indeed, against any analogy to a relationship between things and an abstraction or logical construction out of things. For sense contents aren't things. Plumbers are. Statements about plumbers are statements. Statements about sense-contents aren't statements, aren't premisses. Or rather, in so far as statements about sense-contents, such as "I see a dagger", are insusceptible of error, there is nothing which would make them wrong and nothing which would make them right. In so far as there is nothing which would make them wrong or right they are not statements, not premisses, not something from which anything can be deduced. In so far as statements about sense-contents are statements, are verifiable, can be right, so far they can be wrong, and so far the Sceptic asks about them again "How do we know them?" Suppose a Sceptic asks "How do we know that matter exists?", we answer "Well, here are two hands". The Sceptic replies "But how do you know you have two hands?" We may reduce his doubts about this by reducing the claims involved in "Here are two hands". But when the risk reaches zero the implications do so too and the gap between our ultimate premisses and our final conclusion, the gap which has been widening, becomes indeed unbridgable when the premisses vanish.

6. At this point the reader may well ask "What in heaven's name *are* sense-contents? I can't agree that the question whether material things are to sense-contents as the average plumber to plumbers has or hasn't an answer until I know what sense-contents are."

Ayer offers explanations. But they are insufficient. The reason for this insufficiency is worth mentioning because it operates throughout his book and throughout a great many philosophical disputes. In the controversies about the Trinity (A.D. 318) and in the controversies about the Incarnation (A.D.

¹ Compare G. E. Moore's "Proof of an External World". *Proceedings of the British Academy*.

400) I am sure people defined terms very carefully. And in A.D. 1922-1932 we of the logico-analytic school used to be meticulous about such definitions. What we ignored was the less exact and less elegant work of insuring that the defining but undefined general terms upon which our explanations finally depended were themselves understood. The application of these indefinables we knew could be explained only by examples but the work of providing and arranging those examples and surrounding them with comment bringing out their interconnexions we could not bring ourselves to do. And yet here, in this matter of sense-contents for example, the knowledge of the connexions between the expressions 'sense content', 'observation statement', 'basic statement' are no use to us until we know with regard to one of these expressions when it is to be applied and when not. So, tediously, let us now enquire when we would say of a creature that it is making or understanding a statement about sense-contents. Consider a dog which whimpers as it hunts alone, a cat which growls at another cat, a man who says "Ow!" by himself, a man who says "Ow!" to his dentist, a man who says "That sick feeling again", a man who says "Snakes again" but means nothing about real snakes nor even that he is in for "the horrors".

Between these "speakers" whose utterances tell us what *seem* to be in the air before them or what *seems* to be in their minds and those speakers who tell us what is *really* in the air before them or what is *really* in their minds there are differences of first rate philosophical importance. These differences are continually thought of in terms of the following fantasy. Certain prisoners live in cells with windows opening on to a common quadrangle. But though the cells have windows the prisoners never look through them and so never observe directly what is going on in the quadrangle. Each is so shackled that he is obliged to rely entirely upon reflections in a mirror which only he can see. Some of the reflexions come not from things happening at the time in the outside world but from pictures stored and even constructed in a mechanism built into each cell. This mechanism is not itself observable but from time to time it throws reflexions of the pictures it contains into the mirror on the wall. And besides the mirrors there are sound reflecting devices as well. If one of these prisoners sees snakes in his mirror he very naturally calls out "Snakes". From what he sees in the mirror he infers that there are snakes in the quadrangle and if his visual and auditory reflectors don't soon show his neighbours talking and acting as if they see snakes he

will be very much surprised. Of course, sometimes there may be something which makes him suspect that though his mirror shows snakes the mirrors of others will not and in these cases he will sometimes think that his mirror reflects the external situation but often he will think that it does not. If he thinks that it does not he may confine himself to remarking that his mirror shows snakes or that there are snakes in his mirror.

The connexions between the statements the prisoners make about the external things in the quadrangle and the statements they make about what is to be seen in their mirrors resemble at least superficially the connexions between the statements people make about material things and the peculiar "statements" which have often been described as descriptions of what is immediately observed and which Ayer calls statements about sense-contents.

7. Now Berkeley, Hume, Mill, Russell and Ayer in *Language Truth and Logic* are very much concerned to make us face this fantasy of the prisoners and the mirror images and to recognize fully its inappropriateness to ourselves and our sense-contents.

The prisoners might, especially after several years, begin to wonder whether their mirrors were accurate and even whether anything at all went on in the quadrangle and this doubt would the more readily occur to them if it occasionally happened that one of them failed to distinguish between (1) an internally generated reflexion which would have no echo in the mirrors of his fellows and (2) externally generated reflexions. Their scepticism would be indeed a very unpractical speculation since the penalty for turning from the mirrors and looking out of the windows at "reality" is death or the prisoners' heads are so fixed that they cannot do this. But though their question is exceedingly unpractical in such circumstances one would hardly say that it had no meaning for them. For they remember how the matter would have been settled in the days of their freedom, and were they released they would quickly learn the truth in the old way; we cannot say that there is nothing they would count as relevant to a statement "Snakes in the quadrangle" which they would not count as relevant to "Snakes in all mirrors". For it is still true of them that *if* they were placed as they now cannot hope to be placed they *would* count as very relevant to "Snakes in the quadrangle" things quite beside the point as far as "Snakes in all mirrors" is concerned. In short, the things in the quadrangle are not even for these prisoners logical constructions out of mirror images. The power which has imprisoned their bodies has not imprisoned their minds and they

can still dream of what they now can never see. What philosophers like Ayer wish to emphasize is that people who ask "Are material things like what we think them to be? Are they yellow sometimes or not? Are they round or square? Are there any material things at all? Have appearances any causes whatever?" are dominated by the idea that men who are, as we say, "describing their sense-contents" are to men who are describing material things as prisoners describing their own mirror images are to prisoners describing the things in the quadrangle. Hume and still more Russell and Ayer remind us that our language for describing the connexion between how things seem and how things are is constructed as if this model were appropriate. What they urge is that it is inappropriate and that guided by this model we ask metaphysical questions about matter and approach their solution in an inappropriate way. In the case of the prisoners, once they are confident about the pattern of mirror images they may expect, any question about what is going on in the quadrangle is unpractical. But in our case, once we are confident about how things will seem, any question about how things are is not merely unpractical, it is not a question. For there is nothing we would call finding out that what in all ways to all people at all times seemed to be so was not so. So far the phenomenologists are right—the model of the prisoners in the cells is inappropriate and misleading. Unfortunately in their efforts to explain how our position is not like that of the prisoners they have very naturally tried to say what our position is like and have shown that even they have not realized how fundamentally unlike it is to that of the prisoners. For they say that our position is like that of the prisoners in what I am going to call their second, or phenomenological, condition. This is as follows:—

8. We can imagine that after a long time the prisoners come to mean no more by "Snakes in the quadrangle?" than they have meant by "All mirrors now and always will show reflexions suitable for there now being snakes in the quadrangle". It is important to remember exactly what this comes to. It is this: It is no longer true that *were* the prisoners to look out of the windows they *would* count what they then saw. It must not be supposed that in consequence they will be unable to make a distinction between real and hallucinatory snakes. There will still be cases where a man's mirror misleads him. His mirror will show perhaps a green snake coming nearer and nearer, growing larger and larger. He says "A snake". But instead of going on as a snake image usually does, to his horror, as it

grows larger it comes more and more to resemble the face of someone he once knew. Or again, maybe though his mirror shows a snake the mirrors of others don't and this is reflected in his room by his sound reflectors saying "No, no snakes to-day". Indeed the actual procedure of the prisoners will be little different from what it was when snakes were snakes. They will still speak of real and imaginary, real and hallucinatory snakes and so on. And because there will be no time when further watching of the reflectors will be definitely no longer to the point there will be no sharp line between cases where the question "Is it a real snake?" is no longer a question which can be answered by further waiting and watching for what happens and cases where it can be so answered. Consequently the prisoners may, without realizing what they are doing, ask the question "Even if all mirrors were at a certain time to show snakes and all mirrors were *always* to show scenes appropriate to there having been snakes at that time, would that guarantee that there really were snakes at that time?" They might ask this question without realizing that by its own provisions the question had ceased to be a factual one and had become a logical one to which the answer is definitely "Yes".

It would then indeed be appropriate to say to them "But a snake you know, a snake in the quadrangle, is a logical construction out of mirror-snakes. The existence and character of snakes in the quadrangle are deductions from mirror images just as the existence and character of the average mirror is a deduction from the existence and characters of mirrors. A question about a snake in the quadrangle just is a question about mirror images."

The prisoners might protest against this. They might say, for example, "But surely a question about real snakes in the quadrangle cannot be the same as a question about mirror images. For suppose some mirror images favoured the snake hypothesis while others were against it and we knew that this 'ambiguity' in the evidence would persist for ever. In such a case we should know the answer to the question 'Do mirror images favour the snake hypothesis?' and yet not know the answer to the question 'Are there snakes or aren't there?' This shows that the questions are not identical."

Then the wise among them would have to reply: "Suppose that Englishmen spoke ferociously against the people of another nation and even sent against them weapons of destruction while yet whenever they came upon people of this nation they did their best for them. In such a case we should know the answer

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to the question 'Are the feelings and actions of Englishmen in favour of the hypothesis that they hate members of that nation?' The answer would be 'Some are, some are not'. But if one were asked 'Does the average Englishman hate these people or doesn't he?' one might well reply 'Well I don't know'. Here, however, when one is not at all uncertain as to what further research would reveal and is certain that the evidence will continue to be ambiguous this 'I don't know' does not express ignorance of the facts but hesitation as to what to say. Consequently although this shows that statements of the sort 'The average Englishman is of such and such a character' are not so simply related to statements about Englishmen as is suggested by the sample 'The average Englishman is 5 ft. 10 in.' it remains true that facts about the average Englishman just are matters of fact about Englishmen. Likewise, in spite of what you remind us of, facts about snakes in the quadrangle just are matters of fact about mirror images."

I will not trace further the parallels between the prisoners' all-pervading doubts about things in the quadrangle and our all-pervading doubts about material things. We have seen enough to understand why Hume, Russell, Ayer and others have urged that the first condition of the prisoners is a misleading model for describing the relation between material things and their appearances and have also spoken as if the second condition of the prisoners provides a model which is valuable and adequate.

9. It is profoundly valuable and largely adequate. *But* I now again submit that it is *misleading too*. And I offer the same reason as before: Mirror images are things, sense-contents are not. Mirror images are "public", sense-contents are "private". If you are not sure whether what you see is a real snake or not you can ask someone else, put out your hand, watch what happens when a rabbit passes or take a photograph. True, some of these moves are not to the purpose when you are not sure whether there really is a reflexion of a snake in a mirror in front of you. But some of them are; moves of the same sort are; you can ask someone, you can take a photograph, you can shake yourself and look again and so on. In short whether you say "A snake (real)" or "A snake in the mirror" someone else can correct you and you yourself, taking a second glance or some other step, may correct yourself. Of course, if you are right you won't need to be corrected, but you could be if you were wrong. Now with regard to a snake in the mirror of your mind it's very different. With regard to the snakes in

your unconscious mind, or with regard to what your real sentiments or wishes or beliefs are, it's not so very different. Other people may argue with you about what is in the depths of your mind, and upon investigation you may find that they are right. But with regard to what lies on its surface, with regard to whether at a given moment you feel pain or have a sick feeling or see stars or snakes, in a sense which doesn't imply real snakes nor even "the horrors", with regard to these things, it's very different. For (1) anyone who seeing no snakes tries to correct you has misunderstood you, has taken you to be making an 'objective' statement about a 'public' snake. (2) If you say "I think I am in pain" people will take this to mean that you are having a queer sensation which isn't definitely painful or else they just won't understand you at all or they will think you are making a joke, because of course 'I think' is quite inappropriate here, suggesting as it does that you may upon further investigation correct first impressions *in the way in which you may if you say "I think I have a cold" or "I think I am in love again" or "I think I again have the horrors"*.

Some have tried to describe the peculiarity of statements about sense-contents by saying that they are susceptible only of verbal error. They meant that though if a man says "A dagger" we can't, if he is speaking of his sense-contents, correct him by investigating and finding that really there is no dagger anywhere near, we can ask him to draw what he sees and then if he draws a carving knife say "You mean a carving knife". But to say that statements about sense-contents are susceptible only of verbal error obscures the fact that they are also not susceptible of verbal error in the ordinary way. For if a man is describing his sense-contents and exclaims "A dagger" we cannot take a look at what he is describing, find it's a carving knife and then say "You mean a carving knife". Yet this is what we do in an ordinary case of detecting verbal mistake. The peculiarity of statements about sense-content is better summed up by saying that they are true when the speaker says the same thing in all the ways he has of saying it—he not only says "I have a headache" but sweat stands on his brow.

This immunity to error whether of fact or of ordinary verbal error which characterizes statements about sense-contents could also be described by saying that they haven't the usual implications. They can't be wrong in the usual ways. *Ipsa facto* they can't be right in the usual ways. And therefore they aren't statements in the usual ways. In other words the very features which make us call certain of a man's utterances

statements about his own sense-contents and "not-objective" make it inappropriate to call these utterances statements at all. *A fortiori* they make it inappropriate to call these utterances "statements of the premisses upon which he relies for conclusions about material things and from which in sufficient number he could deduce such conclusions". Therefore it is absurd to say that statements about objective things, including material things, are related to, can be reduced to, statements about sense-contents just like statements about logical constructions can be reduced to statements about what they are logical constructions out of.

10. This doesn't mean that there has been no good in saying that material things are known from sensations as the average man is known from individual men. On the contrary this model of the logic of statements about material things has freed us from the power of the Sceptic's depressing model just as that freed us from the Innocent's model which gives a vulnerable optimism. True we have found that the logical construction model is inadequate too. But in doing so we have seen something of how it is inadequate. And after all our ultimate object is not to find a complete simile for the logic of matter any more than the poet's object is to find a complete simile for what he describes. It is to see it for what it is. Philosophy is not only less like discovery of natural fact than people once supposed, it is also less like the discovery of logical fact than they next supposed, and more like literature—which makes it again more like the discovery of natural fact, only now it is the discovery of familiar fact through the recall of familiar logic.

11. Ayer, of course, is not all unaware of the peculiarities of propositions about sense-contents—only he doesn't do justice to his own awareness. On pages 90-93 and in Chapter VII he writes about the connexion between propositions about sense-contents and propositions about material things and propositions about mental things. And on page 93 there is a most important passage about the connexion between propositions which describe the qualities of a presented sense-content and sensations. He comes very near to saying that statements about material things are based on sensations. This surely is the truth. If I say "Mice" and you say "What makes you think so?" I reply "The smell" or "I smell them" or "Can't you smell them?" If I reply "I smell them" then *your* reason for thinking there are mice is the fact that I can smell them but *my* reason—or rather what makes it reasonable for me to think that there are mice is different, it is the smell I smell, it is a sensation of smell.

And as Ayer points out the sensation is not a proposition about it. Now our vocabulary for talking about logical relations is suitable when we are dealing with the relations between propositions and propositions, statements and statements. When we try to apply it unmodified in other contexts we muddle ourselves. Nothing more can be said about this here. And unfortunately Ayer in the Introduction slurs the good things he said in the body of the book. For on pages 10, 11 he writes " . . . I maintained that there could not be such things as basic propositions . . . I seem not to have perceived that what I was really doing was to suggest a motive for refusing to apply the term 'proposition' to statements that 'directly recorded an immediate experience', and this is a terminological point which is not of any great importance."

I believe that on the contrary it is of the first importance. To fully understand Ayer's motive for refusing to apply the term 'proposition' to statements that directly record immediate experience would be to understand why one should refuse to call these statements statements and to understand this would be to understand why one should refuse to call sensation knowledge. And as Professor Prichard urged at Oxford in 1938,¹ this is of the first importance. Without understanding this one cannot understand the puzzles about knowledge of matters of fact, whether psychological or physical, or indeed puzzles about matters of value or validity.

12. In Chapter IV, "The A Priori", Ayer writes, page 75, "The contention of Mill's which we reject is that the propositions of logic and mathematics have the same status as empirical hypotheses; that their validity is determined in the same way. We maintain that they are independent of experience in the sense that they do not owe their validity to empirical verification. We may come to discover them by an inductive process, but once we have apprehended them we *see* that they are necessarily true." (Italics mine.) We *see* the necessary connexion between a proposition and what follows from it.

This answer by itself suggests a like answer about how we know that an act or picture is good and reads like what Ayer calls rationalism.

But he does not leave this answer without further explanation of what this *seeing* is. On page 77 he writes "The principles of logic and mathematics are true universally simply because we never allow them to be anything else. And the reason for this

¹ *Proceedings of the Aristotelian Society*, Supplementary Volume XVI.

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is that we cannot abandon them without contradicting ourselves, without sinning against the rules which govern the use of language and so making our utterances self-stultifying. In other words, the truths of logic and mathematics are analytic propositions or tautologies."

These general statements are supplemented with examples though these examples are not carefully studied. Ayer does wonders in his fifteen pages on the *a priori* but he necessarily leaves many questions unanswered and he does not sufficiently warn us of the inadequacy of his treatment.

Even after it is allowed that all necessarily true statements are analytic it remains to consider how analytic statements are known, what they are, how they are related to laws and regularities of Nature and how to rules and regularities of language, how they may be true and yet have no factual content not only in the sense that they state no fact of nature but also in the sense that it is metaphysically misleading to talk of them as facts about universals, abstract entities.

About the connexion between analytic statements and the facts of language Ayer says in the Introduction that a logical proposition "elucidates" the use of an expression (p. 17) and in the text (p. 79) he says that an analytic proposition "illustrates" the way we use symbols, "calls attention to linguistic usages of which we might otherwise not be conscious". What is required is an explanation of what these suggestive but cryptic phrases come to.

13. And when this is done it will turn out that metaphysical statements are saved from senselessness in the very way in which Ayer says (p. 79) that logical ones are. For metaphysical statements too bring out the way we use certain symbols. True the logician is nothing if not photographic while the metaphysician confuses us with caricature. But the logician tells us only what would be obvious but for complexity while the metaphysician shows us what all the structure of our language conspires to conceal.

14. What happens when we seek to substitute logic for metaphysics is beautifully illustrated in Ayer's introduction. With meticulous care he dresses the verification principle so that it may gain access to those circles where he hopes it will exert a useful influence. "... a statement is ... literally meaningful if and only if it is either analytic or empirically verifiable" (p. 9). This becomes (p. 16) "... unless it [a non-analytic statement] satisfied the principle of verification it would not be capable of being understood in the sense in which scientific

hypotheses or common-sense statements are habitually understood."

But even this, if it is to be unexceptionable, must mean no more than "Unless a statement has the sort of verification a scientific or common-sense statement has it won't be a common-sense or scientific statement." This draws attention to how we actually do classify statements by the way they are verified so that even now the principle is still not useless. But undoubtedly the poor thing is not what it was, and quite incapable of eliminating metaphysics or anything else.

15. Ayer is too acute not to realize that something has gone wrong and too honest not to own it (p. 16). And fortunately in the text he is not so concerned with the proprieties as he is in the Introduction. The fact is, the verification principle is a metaphysical proposition—a "smashing" one if I may be permitted the expression. After study of it we come to its complementary platitude "Every sort of statement has its own sort of meaning" which by the verification principle itself becomes "Every sort of statement has its own sort of logic". This last is what Ayer is near to recognizing in the case of *a priori* statements.

By deduction we may pass from statements of one type to statements of the same type but not from statements of one type to statements of another type. We can pass from logical statements to logical, from ethical to ethical, from matter of fact to matter of fact, from psychological matter of fact to psychological matter of fact, from material matter of fact to material matter of fact. But we cannot pass from statements about sense-contents to statements about material things. And we cannot pass, neither by deduction nor by induction, from statements of fact, whether about things or about words, to logical statements. Nevertheless the basis of logical statements is experience and not a peculiar apprehension of a peculiar subject matter. It is not the stuff of their foundation which is peculiar, it is the way it supports them. It is not their subject matter which is peculiar, it is their purpose.

It is the same with ethical statements. And though light is thrown on their peculiar logic or verification by representing them as a mixture of empirical statement, exclamation and exhortation, this account of them still misleads. For it suggests that such statements as "Tolstoy ought not to have refused the royalties on his books" or "It's lovely" could be proved by establishing the relevant points of fact and then giving our opponent a "shot" of some drug which would make him feel like us about what we are talking of. Yet this, it is certain,

would not be altering his attitude in the way we also call "showing him the beauty of the picture, the wrongness of the act". For to do this his attitude must be altered by *rational* persuasion. And this is done by drawing attention rhetorically to the features of what we are talking about, insisting upon how different it is from this, how like to that, passing insensibly from the purely factual through the semi-factual, semi-critical, to the critical predicate at issue. Only this mixture is critical proof and the name of it is rhetoric.

"Induction" is the name for the process of justifying conclusions about the future from premisses about the present and the past. And of course if we mean by the proper justification of a probability claim only the transformation of a statement of alternatives, as when we talk of the probability of a head given that there will be either a head or a tail, then induction isn't proper. But then it not only *isn't* but *can't* be proper. Since a probability claim about the future cannot be a transformation of premisses about the present and the past. The idea's absurd.

No doubt a study of the features of induction, an explicit recognition of how it differs from other rational procedures, alters our attitude to it. Re-consideration of the familiar features of anything, any procedure, any situation, any person is apt to alter our attitude to it. We see it better for what it is.

Sometimes our change of attitude may be described by saying that what once seemed good now seems bad or *vice versa*. But more often in these cases in which we are studying the familiar even when we start our study with a view to deciding whether something is good or bad, valid or invalid, true or false, P or not P, in the end that question becomes of no importance. Sometimes it's "unsettleable". But it needn't be. It just becomes of no importance.

That is how it is with the questions (Chapter VIII and pp. 18-20) "Do we really have reason for the claims we make about the minds of others?" "Do statements about the mind of another amount to more than predictions about what he'll do and how he'll look?" It's easy to say that that's how it is with these questions but it's hard to show it.

III.—THE MORAL PROBLEM—THE PROBLEM FOR CONDUCT.

BY REGINALD JACKSON.

1. THE ETHICAL PROBLEM.

[Reginald Jackson of Edinburgh University, who died in 1946, left some unpublished MSS. The present article was apparently intended for publication in book form, but was not completed by the time of the writer's death. Professor H. H. Price has edited the text, but certain deciphering difficulties have proved insoluble. Square brackets and numbered footnotes are editorial suggestions and explanations.]

WHY the *Moral* Problem? Why not the *Ethical* Problem? For all who labour at the task of understanding the agent's task need vigorously to distinguish his task from theirs. And the custom, however arbitrary in origin, of earmarking the adjective 'moral' for his task and the adjective 'ethical' for theirs has become sufficiently current among discriminating writers to merit general observance. I do observe this distinction. By 'the moral problem' I do mean the agent's task, and I do not mean the task of understanding the agent's task.

If with this we can justify the phrase '*moral* problem', with what can we justify the phrase '*moral problem*'? Unless we go the length of challenging the assumption that of every problem the solution is a judgement, we can only through confusion take the agent's task for a problem. To the performance of the agent's task performance of other tasks is perhaps indispensable, and these other tasks perhaps include problems. Conduct perhaps involves judgement. But even if not separable, conduct is still distinguishable, from judgement. And the performance of the agent's task is itself conduct, not judgement.

In nevertheless contending that the agent's task is itself a problem, I am innocent of any tendency to confuse conduct with whatever judgement conduct may involve. If the confusion makes for a precipitate acceptance, the detection of the confusion also makes for a precipitate rejection, of my contention. What the detection of the confusion justifies is the rejection only of the

more specific contention that the agent's task is a problem whose solution is judgement. And this I neither assert nor imply.

Instead, I do go the length of challenging the assumption that of every problem the solution is a judgement. Of only one of two kinds of problems, therefore distinguished as *theoretical*, is the solution a judgement. Of the other kind of problem, therefore distinguished as *practical*, the solution is conduct. Philosophy has been hitherto so dominated by the assumption thus challenged, that I may not hope easily to persuade the reader that I mean what I say.

It is through the opposition of 'moral' to 'intellectual' that the opposition of 'moral' to 'ethical' must be understood. As the opposition of 'moral' to 'intellectual' is based on the difference between conduct and judgement in general, so the opposition of 'moral' to 'ethical' is based on the difference between conduct and judgement about conduct. My problem is not the moral problem but the ethical problem. The moral problem is only the subject of my problem. I aspire to teach, not to preach...¹ I write in the indicative, not in the imperative, mood. I make statements. I do not issue commands. My readers may do as they please. They are required only to think as I please. Not conduct, but judgement, is what I seek to influence: judgement, however, not in general but only about conduct.

The Ethical Problem is the problem 'what is the solution of the Moral Problem?' The solution of the Ethical Problem would not, so far as I can see, even contribute to the solution of the Moral Problem. Nor, so far as I can see, would the solution of the Moral Problem contribute to the solution of the Ethical Problem. If these opinions are accounted paradoxical, it is only because they conflict with paradigms to which nothing more than familiarity has reconciled us.

So much in explanation of my title. But not until I can make good the challenge which my title is designed to lay down, not until I can establish the position that the *agent's* task is a problem, shall I be at liberty to use the expression 'Moral Problem'. Meanwhile my problem being the Ethical Problem, I must formulate this in less controversial terms.

The Ethical Problem is the problem: What are the principles of duty? To say this *is*, is to say more than that this *would be* the Ethical Problem. To say that this *would be* the Ethical Problem is to make only the verbal claim that whether or not

¹ The text appears to read "I add. W, but not Int.". I have been unable to translate this, but conjecture that "add." means "address".

there be such a problem anyone who calls what he believes to be such a problem "ethical" uses the word correctly. To say this is the Ethical Problem is to make also the non-verbal claim that there is such a problem and further that it is a scientific problem. The verbal claim is generally conceded. So is the non-verbal claim that there is such a problem. But the non-verbal claim that it is a scientific problem has been challenged, notably by Analytical Utilitarianism.

For the problem : What are the principles of duty ? is identified by Analytical Utilitarianism with the problem : What are the principles of useful conduct, conduct productive of the good ? The latter is easily seen to be a double problem. Its solution is easily seen to depend on the solution of two further problems : (1) What is the kind or the kinds whose instances are good ? (2) What principle or principles of conduct are productive of instances of this kind or kinds ?

Of these the first problem is, and the second is not, a scientific problem. To insist either that the second or the double problem is a or the Ethical Problem is to view Ethics as not science but art, in the sense in which Medicine and Education are not sciences but arts. Indeed, Medicine and Education are subsumable under the second problem. If we are determined to view Ethics as a Science we must, even at the cost of modifying the meaning of the word, insist that only the first problem is a or the Ethical Problem. The challenge can be met only by refuting Analytical Utilitarianism. Its argument is good, but proceeds upon a disputable definition of duty.

The direct refutation of mistaken views is a task to be only reluctantly undertaken. It is a laborious task. For of mistaken views there may be any number. And it is a thankless task. For even though you refute all actual, you may overlook many possible errors. Even moreover if you refute all possible errors, the truth is still established only with the crass irresistibility of argument by elimination.

Those, I think, who maintain that Duty is indefinable are bound directly to refute every plausible conflicting hypothesis. Those, I think, who undertake to define Duty may fairly enjoy exemption. Their task is the direct establishment of their definition of Duty. They thereby indirectly refute all possible conflicting definitions as well as the hypothesis that Duty is indefinable. The indefinability of Duty once conceded, all possible definitions of Duty are of course thereby condemned. But how is the indefinability of Duty to be directly established ?

As I am among those who undertake to define Duty, I shall

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try, without going out of my way to notice conflicting hypotheses, directly to establish my definition. This will be found very different from [the definition offered by] Analytical Utilitarianism. Its implications too will be found very different. Instead of challenging, my definition decisively confirms the claim that the problem 'What are the Principles of Duty?' is a scientific problem.

Exemption from the task of directly refuting conflicting hypotheses does not carry with it exemption from the task of examining definition in general. Than Duty there is no more disputed candidate for definition. That the point at issue is either exclusively or even mainly the nature of definition in general, nobody will suggest. That the nature of definition itself presents a difficult problem and complicates the problem of the definition of Duty, everybody will agree. Some things perhaps are easily defined or easily seen to be indefinable. Only because they are, can anything short of a thorough understanding of a definition even be a "working" understanding. But Duty is neither easily defined nor easily seen to be indefinable. For the solution of the problem of the definition of Duty a thorough understanding of [the nature of] definition is not sufficient. But it is indispensable.

The dependence of the solution of the problem of the definition of Duty on the understanding of definition in general has been underestimated. Just for this reason the dependence of the solution of the Ethical Problem on the solution of the problem of the definition of Duty has been exaggerated. Champions of [an] exclusively nominal definition insist that without defining Duty we cannot know what the word "Duty" means. Champions of [a] real definition insist that without defining Duty we cannot "know" what Duty is. Either piece of ignorance may be represented as a fatal disqualification not only for solving, but even for trying to solve the Ethical Problem.

I shall champion real definition, and this I can best do in the Chapter on "Definition". But my view of the state of mind misleadingly called "knowing what Duty is" I can best expound in the Chapter on "Conception".

2. DEFINITION.

[This seems to be a series of brief notes for a fuller treatment of his subject.]

Definition must be "per genus et differentiam". In other words, to define anything is to say of what kind it is a kind, and

how it differs from other kinds of that kind. Colour is not definable because it is a simple quality ; there is no kind of which it is a kind. Redness is not definable because, though it is a kind of colour, we cannot say how it differs from other kinds of colour. How are we ever to say how one kind differs from other kinds of the same kind ? To say of what kind anything is a kind is to say how it agrees with other kinds of that kind. To say how it differs from other kinds of that kind is to say of what kind it is but they are not. A differentia is nothing but a second genus. The reason for saying that redness is at least partly definable, even half definable . . .¹ It is a species of only one proximum genus instead of two. Which of two genera is the differentia depends on . . .² That not everything, not even every kind, is definable is a commonplace. That an indefinable is not, because indefinable, inconceivable, is also a commonplace. Everyone easily sees that only through the indefinable is the definable ultimately definable, and definition therefore is itself dependent on the accessibility [?] of indefinables.

To define X as Y is not to define X as Y'. Neither is it to define X' as Y. Only those who conceive X can either rightly define X as Y, or wrongly define X as Y'. Only those who conceive X can wonder how or even whether X is definable. Those who think Duty indefinable, and those who think Duty definable but who define it in irreconcilable ways, are all making judgements about Duty and in doing so conceiving Duty.

3. SPEECH AND THOUGHT.

In "Theaetetus" 189E-190A and "Sophist" 263E, thinking is defined as "the soul's silently speaking to itself". Why aloud to another, silently to oneself ? ("Theaetetus" 206D.) Because the thinking can only by expression be made manifest to another, but is already manifest to itself. But the manifestation of one's thinking to another, in other words the production in another of a true judgement about one's mental state, is only one among many purposes of speaking aloud. The purpose is also the production in another of some mental state. But the mental state is not always judgement, nor where judgement [?] always also true judgement, nor where true judgement is it always a judgement about the speaker's mental state.

¹ No main verb in MS. Perhaps read, 'there is [a] reason . . .' R. J. habitually omits 'is'.

² The MS. reads "cp." which I am unable to translate.

The same speech that is spoken aloud with the purpose of producing in another a certain mental state is not spoken silently with the purpose of producing in oneself the same mental state. To speak it silently is already to be in the mental state. We do not ask ourselves questions in order that we may wonder. Self-questioning is wondering. We do not answer our own questions in order that we may judge. Answering these questions is judging. Before we could purpose to produce in ourselves a given judgement, we should need to convince ourselves that the judgement is true.

Because I can read later what I write earlier I can write to myself. Not only . . .¹ but every painstaking thinker avails himself of this expedient. But because I cannot (except by means of a dictaphone) hear later what I spoke earlier, I cannot speak to myself.

Speech, the use of language, is addressed to someone. The speaker speaks with a purpose, and his purpose is not simply to speak. Speech is a means to an end. Sentences are spoken in order that they may be heard, that being heard they may be understood, that being understood they may be heeded. The key to the diagnosis of any form of speech is to be found, not in the mental state of the speaker considered in isolation, but in the mental state which the speaker purposes to produce in the hearer.

The key is generally and vainly sought without reference to the hearer. The statement is a form of speech, to which the corresponding form of thought is the judgement. So far the received doctrine must be upheld. But what is the received doctrine as to the nature of the correspondence? Statements we are told "express" judgements. The speaker states, *e.g.*, E rd.² But why, simply because he judges that E rd, should he state that E rd? Why should he speak at all? Unless in the grip of uncontrollable excitement he speaks with a purpose. What purpose? Not in order that *he* may judge that E rd. For *ex hypothesi* he already judges this. But in order that the *hearer* may judge that E rd. The speaker moreover does not always judge as he states (does not always make a judgement corresponding to what he states). He may lie. Whether he lies or not, his purpose is to lead the hearer to make a judgement corresponding to his statement. Even where he does not lie, his statement is connected with his own judgement only indirectly. His purpose is to lead the hearer to make a judgement. He may

¹ The MS. reads 'Mic'. I cannot translate this.

² I have been unable to translate 'E rd.'

[? not] scruple to lead the hearer to make any judgement which he does not himself make.

Vitiating the received diagnosis of statements, neglect of the hearer is even more prejudicial to a diagnosis of commands. The relation of the statement to the judgement of the speaker has been shown to be less straightforward than the received doctrine requires. Still less straightforward is the relation between a command and the conduct of the speaker. We are told that statements express judgements. We are not told that commands express conduct ; and the important truth, that just as statements are related to judgements so are commands related to conduct, is apt to be dismissed as insufficiently plausible to merit examination. But the judgements and the conduct that are directly related to statements and commands are *not* those of the speaker *but* those which the speaker purposes to produce in the hearer.

A father commands his small son to go to bed. Why ? Not because the father goes to bed. That the father tells the son that E rd because the father judges that E rd, is the received doctrine and has some plausibility. That the father tells the son to go to bed because the father goes to bed, is nobody's doctrine and has no plausibility. But just as the father tells the son E rd in order that the son may judge that E rd, so the father tells the son to go to bed in order that the son may go to bed.

Why is the relation of a command to the conduct of the speaker less straightforward than the relation of a statement to the judgement of the speaker ? Because rightness of conduct depends, in a way in which rightness of judgement does not depend, on circumstances. It cannot easily be right for the son, yet wrong for the father, to judge that E rd. It can, many would say, be right for the son yet wrong for the father to judge that Father Christmas will come to-night. And many would say it can be right for the father, though himself convinced of the falsity of the statement, to tell the son that Father Christmas will come to-night. All will agree (except the son) that it can easily be right for the son, yet wrong for the father, to go to bed. If, however, we consider [a ?] practical rule, rightness of conforming to which does not depend on circumstances varying from agent to agent, we do find the speaker's conduct related to his command in the same indirect way in which the speaker's judgement is related to his statement : " Practice what you preach ".

Just as statements are to judgements, so are commands to conduct. To what are questions in just this way related ? The key to the diagnosis of any form of speech is to be found in the

mental state which the speaker purposes to produce in the hearer. The purpose of a statement is the production of a judgement. The purpose of a command is the production of conduct. The purpose of a question is the production of what? . . .¹ Why does the father ask the son whether E rd? In order that the son may wonder whether E rd.

It may be objected first that the production of wonder is not always, nor even usually, more than a means to an end. We ask questions in the hope that our questions will be answered. "Is it so?" is tantamount to "Tell me whether it is so". The purpose of a question, like the purpose of a command, is the production of conduct. Even this is not always, nor even usually, more than a means to an end. We ask for information. And here the received doctrine that the key to the diagnosis lies in the state [of mind of] the hearer is threatened. The end with which the question is asked may be the production of a judgement in the mind of the *speaker*. All else may be only means to this end.

Secondly, it may be objected that the production of wonder is not indispensable even as a means. The hearer may have already emerged from wonder and may have his answer pat. Is the questioner's purpose then frustrated? Whether I ask for information or for the purpose of testing someone's capacity, the man who, when asked where the Post Office is, patently² wonders before replying leaves his questioner wondering whether the reply is reliable. The boy who, when asked what are 7×6 , patently² wonders before replying leaves his questioner wondering whether the reply is reliable. The first objection implicitly assumes that the forms of speech are to be diagnosed in terms only of ends. This assumption must be rejected. The purpose of a statement is the production of a judgement. Statements are made in order that they may be believed. But this is frequently only a means to an end. The end may be conduct. The speaker may try to make the hearer believe something only in order that he may do something. Why not, instead of making a statement, issue a command? Because the speaker may not expect to be obeyed. A salesman tries to convince a customer of the utility of his wares, only in order that the customer may purchase. He cannot hope to achieve his end by saying simply "Purchase". It is in terms of their *immediate* purpose, not of any *ultimate* purpose, that forms of speech must be diagnosed; and as the immediate purpose of a statement is the production of a judgement, whether or

¹ I have been unable to translate this sentence.

² The MS. reads "patly" [patiently?].

not as means to conduct, so the immediate purpose of a question is the production of wonder, whether or not as means to the extraction of an answer.

[A space is left in the manuscript for the reply to Objection 2, but the reply is missing].

4.—THEORY AND PRACTICE.

The familiar three-fold scheme of forms of speech I have hitherto rather championed than challenged. My attempt has been to show that the relation of command to conduct and of question to wonder is exactly the relation of statement to judgement. The concession that by no means all conduct is obedience to a command must be balanced by the claim that by no means all judgement is acceptance of a statement. The concession that all judgement is the acceptance of a possible statement must be balanced by the claim that all conduct is obedience to a possible command. If moreover all judgement is fairly presentable as acceptance of an actual inner statement, so is all conduct no less fairly presentable as obedience to an actual inner command. The thinker tells himself what to judge only as the agent tells himself what to do.

Speech differs from animal cries in having a purpose. Of every form of speech the purpose is the production of some form of thought in someone to whom the speech is addressed. Of a statement the purpose is the production of a judgement, of a command the purpose is production of conduct. Of a question the purpose is production of wonder. Of these three forms of speech each is related to a different form of thought in exactly the same way.

To this extent, but only to this extent, is the familiar three-fold scheme of forms of speech vindicated. It is coherently derived from the three-fold scheme of forms of thought. The division into statement, command, question stands or falls with the division into judgement, conduct, wonder. Do both divisions stand or do both divisions fall? The fundamental division into judgement, conduct and wonder falls, and with it falls the derivative division into statements, conduct and questions. But my criticism of the fundamental division will be no less constructive than destructive. It is indeed only by advocating a new scheme that I shall seek to displace the old.

The division into judgement, conduct and wonder is at fault in disregarding the divisibility of wonder into enquiry and deliberation. The reply to this will be the denial not that wonder

can, but that wonder need, be thus divided. Wonder is divided in various ways and *inter alia* into enquiry and deliberation. But judgement also is divided in various ways. And so is conduct. The division of the genus into judgement, conduct and wonder is not vitiated by the consideration that these species may in turn be taken as genera and divided into sub-species. The [?] *result* of the division of wonder is no less legitimate than the [?]*results* of the division of judgement or conduct.

What if deliberation differs from enquiry exactly as conduct differs from judgement?

The division into judgement, conduct and wonder is at fault in disregarding the divisibility of wonder into enquiry and deliberation. That the difference between enquiry and deliberation is disregarded is plain. But why must this difference be regarded? Why may this difference not be reserved for a further step in division? Because deliberation differs from enquiry as conduct differs from judgement.

Wonder is the attempt to solve a problem. Of some problems the solution is judgement, of others conduct. Of problems whose solution is judgement, the attempted solution is enquiry. Of problems whose solution is conduct, the attempted solution is deliberation.

The division into statements, commands and questions is similarly at fault in disregarding the divisibility of questions into those whose purpose is to produce enquiry and those whose purpose is to produce deliberation. Where the difference between these two species of question is disregarded, consistency requires that the difference between statement and command be also disregarded, and the division into question and answer.

Fundamental division.

- | | |
|---|---|
| 1. Wonder { Theoretical—enquiry.
{ Practical—deliberation. | 2. Theoretical { Wonder—enquiry.
{ Solution—judgement. |
| Solution { Theoretical—judgement.
{ Practical—conduct. | Practical { Wonder—deliberation.
{ Solution—conduct. |

Derivative division.

- | |
|---|
| 1. Question { Theoretical.
{ Practical. |
| Answer { Theoretical—statement.
{ Practical—command. |

The systematic ambiguity of "theoretical" and "practical" should be noticed. Judgement and conduct are theoretical and practical only as body and soul are corporeal and psychical. Judgement is theory, conduct practice.

Wonder is theoretical or practical according as the attainment of its end is theory or practice.

An answer is theoretical or practical according as its purpose is to produce theory or practice.

A question is theoretical or practical according as its purpose is to produce theoretical or practical wonder.

Such systematic ambiguity is not objectionable. What must be insured is a meticulous correspondence between the variety [?] of kindred senses of "theoretical" and the variety [?] of kindred senses of "practical". In particular we must avoid taking liberties with the word "practical" which we do not take with the word "theoretical". The adjectives "theoretical" and "practical" guarantee [?] no more than "related to theory", and "related to practice". And "Theoretical N_1 "¹ may be related to theory in one way. "Theoretical N_2 " may be related to theory in another way; but "Practical N_1 " and "Theoretical N_1 " in the same way.

The familiar three-fold scheme is based on the mistaken assumption that "Question" and "Answer" are as such theoretical.

Only those who...² this rigour of avowed opposition of "practical" to "theoretical" will find in my proposal to divide problems etc. into theoretical and practical anything more than a commonplace. But genera commonly divided into theoretical and practical are exhausted by the specification [?] of [those] genera in the divisions which I advocate. And where the genus as such is related to theory in a way in which it is not related to practice, the division into theoretical and practical does not prosper.

Into theoretical and practical Aristotle divided knowledge, more generally judgement, in other words *theory*. And the common division of problems etc. into theoretical and practical rests on a division of *theory*. The expressions "theoretical theory" and "practical theory" need not be respectively tautologous and self-contradictory.

By "theoretical theory" may be meant "*theory for the sake of theory*". By "practical theory" may be meant "*theory for the sake of practice*". But these divisions of theory are not exclusive. The same knowledge may on different occasions, even on the same occasion, be sought both as end and as means. The affirmation that Ethics is in this sense practical is at least plausible. The denial that Ethics is in this sense theoretical is not even plausible.

¹ I do not know what N_1 and N_2 mean.

² The MS. appears to read "rmk". The obvious conjecture is "remark", but this does not seem to make sense.

By "theoretical theory" may be meant "theory about theory". By "practical theory" may be meant "theory about practice". But this division of theory is not exhaustive.

Epistemology (Logic)¹ and a part of Psychology are in this sense theoretical . . .² Ethics and [?] part of Psychology are in this sense practical sciences. But there is no end to the subjects of possible theory. Of even action the subjects are numerous. Alongside theoretical theory and practical theory, there are mathematical theory, chemical theory, etc.

The common division of problems etc. into theoretical and practical fares no better. It is dominated by the assumption that of every problem the solution is a judgement, to every question the answer is a statement. But my division rejects this assumption. I have distinguished the practical problem as one whose solution is conduct, from the theoretical problem as one whose solution is judgement. And I have distinguished the practical question to which the answer is a command from the theoretical question to which the answer is a statement. The genus, in the divisions I advocate, is not as such related either to theory as not to practice or to practice as not to theory. And the divisions are both exclusive and exhaustive.*

The problem [question] thus defined is commonly identified with the genus problem [question]. The practical problem, [question] thus defined is commonly overlooked. If these definitions are adopted what I undertake to establish is: not all problems [questions], are theoretical; some problems [questions] are practical.

Defining wonder as the attempt to solve a problem, I have advocated the deriving of the division of wonder into enquiry and deliberation from the division of problems into theoretical and practical. Everyone will allow that a problem for enquiry and a problem for deliberation may be opposed as in some sense theoretical and practical respectively. Can we, producing agreement in what sense, reach any measure of agreement about the division into enquiry and deliberation?

Perhaps we can agree at least that to enquire is to wonder whether something is the case and that to deliberate is to wonder whether to do something.

¹ The MS. reads "Ep (Log)".

² The MS. reads "(sc sc, w" [? rr]). "sc sc" presumably means "sciences", but I have been unable to translate "w" (or "rr").

*In the adjective "theoretical" there is no restriction on either subject or end. The problem [question] may concern theory. It may concern anything else. Among possible subjects is *practice*. The Ethical Problem is theoretical.

- { To wonder whether something is the case is to attempt to solve a theoretical problem.
- { To ask whether something is the case is to ask a theoretical question.
- { To solve such a problem is to judge.
- { To answer such a question is to make a statement.
- { To wonder whether to do something is to attempt to solve a problem.
- { To ask whether to do something is to ask a practical question.
- { To solve such a problem is to act.
- { To answer such a question is to issue a command.

Every reader perhaps now understands why I *think* that problems are divisible both exclusively and exhaustively into theoretical and practical. But every reader perhaps feels that I have mistaken a derivative for a fundamental peculiarity. I shall be told that the problem whether to do something is always reducible to the problem whether something is the case, its sole peculiarity being that, concerning¹ practice, it is applied [applicable (?)]² to practice.

Granted that to enquire is to wonder whether something is the case and to deliberate is to wonder whether to do something, I shall be told that the agent wonders whether to do something only so far as he wonders whether something is the case, *viz.*, whether by doing something he would fulfil a given condition. If his wonder whether to do something culminates in his doing it, he does it because he judges that by doing it he would fulfil the given condition. This judgement, not the consequent conduct, is the solution of a problem. Deliberation is a species of wonder only in being a species of enquiry, and enquiry and wonder are the same.

The agent's wondering whether to pay his tailor may be his wondering whether by paying his tailor he would promote his own happiness. Or it may be his wondering whether by paying his tailor he will promote happiness in general. Or it may be his wondering whether by paying his tailor he would be acting rightly. All these are problems whether something is the case. But because they are applicable [applied (?)] to practice they can be formulated as problems whether to do something.

By whom are these problems applied to practice, by whom can they be formulated as problems whether to do something? Only by the agent who has already made up his mind to promote

¹ *I.e.*, because it concerns.

² The MS. reads "appl".

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his own happiness, to promote happiness in general, or to act rightly. Such an agent, I grant, need only enquire. For he has already solved the problem for deliberation. But how does the agent make up his mind so to act as to fulfil the given condition? Whatever condition is selected, the agent may wonder whether so to act as to fulfil it. And this wondering can have nothing to do with any wondering whether something is the case.

Suppose the agent has reached the goal of every possible relevant enquiry. Suppose he knows that by doing the proposed act he would promote his own happiness or would promote happiness in general or would be acting rightly. Let the agent be omniscient. Whatever he knows, he has not yet begun to deliberate. He has but prepared the way for deliberation. Instead of needing to deliberate whether to pay his tailor, he need only deliberate whether to promote his own happiness etc. He has purified the practical question of theoretical accretions.

5.—DUTY DEFINED AS OBLIGATORY CONDUCT.

It is with judgement (theoretical) in general that I have so far compared and contrasted conduct (practical). I shall later enquire whether conduct is more analogous to one species of judgement than to another. I shall contend that conduct is analogous especially to inference. And my treatment of inference and choice as co-ordinate species of the genus Reasoning will bear Ethical fruit in a definition of Duty as reasonable conduct.

Even the less intimate analogy between conduct and judgement in general yields a definition of Duty. About this definition the only novelty is my insistence that it is a definition. It must not on that account be dismissed as unimportant.

Against the definition of Duty as obligatory conduct, I do not expect the objection either that some Duty is not obligatory conduct or that some obligatory conduct is not Duty. Nor do I expect the objection that what I offer as analytic is really synthetic, i.e., that being Duty and being obligatory conduct, granted coincident, are not identical. The objection I expect is that, the expressions "duty" and "obligatory conduct" being synonymous, the definition of Duty as obligatory conduct has all the triviality of the definition of an oculist as an eye-doctor.

Instead of at once denying that the expressions "duty" and "obligatory conduct" are synonymous, I ask in what the triviality of the definition of an oculist as an eye doctor consists. And I ask as what, if not as an eye doctor, an oculist is to be defined. Granting that the expressions "oculist" and "eye doctor" are

synonymous, we must not say "an oculist is an eye doctor"? But is oculist therefore indefinable? Let us simplify the illustration, by supposing the expression "eye doctor" to have no synonyms. Is eye doctor therefore indefinable? No. Though we must not say "an eye doctor is an eye doctor" yet the expression "eye doctor" is already a definition of eye doctor.

My main concern is not with the relation between the expressions "duty" and "obligatory conduct". My main concern is to insist that, whether these expressions are synonymous or not, in the expressions "obligatory conduct" and "morally obligatory" we already have a definition *per genus et differentiam*.

This is at least, by implication, universally denied. The position taken instead is:

(1) That in the expression "morally obligatory" the word "obligatory" has a different meaning from the meaning it has in other expressions.

(2) That the office of the adjective "moral" is to distinguish not a kind of obligation, but a meaning of "obligation".

It is because this position is taken that we find the definability or indefinability of "duty" or "moral obligation" commonly identified with the definability or indefinability of "obligation".

The adjectives "obligatory" and "right" differ as contrary and contradictory of the adjective "wrong". Even if no conduct is morally indifferent, even if the agent, whatever he does, does either what he ought or what he ought not, much conduct is at least describable, though not adequately yet truly, in morally indifferent respects. Suppose that to do X is to do either X1 or X2. Then to do X may be obligatory. And to do either X1 or X2 will be obligatory. But neither to do X1 nor to do X2 will be obligatory, though both to do X1 and to do X2 will be right.

"Duty" agrees in application [?] not with "right conduct" but with "obligatory conduct".

Right and wrong judgement, we may be told, are true and false judgement. Rightness and wrongness of judgement, we may further be told, are truth and falsity of judgement. Of these two positions not the former but only the latter would directly menace my definition of "duty". But neither position is tenable, and I shall dispute both. I shall try to show that the distinction between right and wrong judgement, so far from being identical with, is not even coincident with, the distinction between true and false judgement.

Instead of judgement I shall begin with opinion. Anyone who is about to toss a coin twice will opine, and would be right in opining, even in judging, that he will throw hh [or] ht [or] th

[or] tt. Though not in judging, he would be right in opining that he will not throw hh; and he would be wrong in opining that he will. Of his attitude toward each of the four possibilities the same account holds. But the four possibilities are *ex hypothesi* exhaustive. It follows that even if he will throw hh, he would be right in opining that he will not and would be wrong in opining that he will; even if the opinion that he will not is false and the opinion that he will is true. He would thus be right in opining falsely and wrong in opining truly.

The concessions that he would be right in opining, he would rightly opine, his opinion would be right, will perhaps be made with progressive reluctance. And the concession that the opinion that he will throw hh would be right will perhaps be withheld. But this last concession I do not demand. I know nothing about opinions which are not opinions of some thinker and *a fortiori* nothing about the rightness of opinions which is not relative to evidence accessible to some thinker.¹

Instead of judgement, I have begun with opinion. But granted that I have shown that the distinction between right and wrong opinion is not coincident with the distinction between true and false opinion, *what* have I thereby begun? Have I begun to show what I have undertaken to show, that the distinction between right and wrong judgement is not coincident with the distinction between true and false judgement? All I have achieved, I may be told, by substituting opinion for judgement, is to gain a respite by attempting an easy instead of an impossible task. It is obvious, I may be told, that right opinion may be false. It is equally obvious, I may be told, that right judgement must be true.

That right judgement must be true is less obvious than it seems. It is indeed a fact. But we shall find it worth while shortly to notice why it is a fact. Meanwhile, granting that right judgement must be true, I rest my denial that the distinction between right and wrong judgement is coincident with the distinction between true and false judgement on the denial that wrong judgement must be false. Our coin-spinner would be even more wrong, in even greater error, if he judged the theory,² than if he opined the theory, that he will throw hh.

Like the opinion, this judgement is in a wrong relation to accessible evidence. Of unevicenced judgements some are true and some are false, but all unevidenced judgement is wrong.

¹ It is not clear whether this paragraph was intended to be deleted.

² The MS. appears to read 'thy'. This is Jackson's usual abbreviation for 'theory'.

Why is it then that right judgement must be true ? Only because right judgement is evidenced judgement, and evidenced judgement must be true. Evidenced judgement is knowledge, and no judgement short of knowledge is right.

The distinction between right and wrong judgement has been shown to be coincident not with the distinction between true and false judgement, but with the distinction between evidenced and unevidenced judgement. *A fortiori* the distinction between right and wrong judgement is not *identical* with the distinction between true and false judgement. But is the distinction between right and wrong judgement identical with the distinction between evidenced and unevidenced judgement ? Conduct can as little be evidenced or unevidenced as it can be true or false. On the identity of the distinction between right and wrong judgement with the distinction between evidenced and unevidenced judgement, just as ruinously as on the identity of the distinction between right and wrong judgement with the distinction between true and false judgement, my definition of duty would founder.

If we persist in representing judgement *in general* or conduct *in general* as a solution (to a problem) we are compelled to distinguish right judgement or conduct as the right solution from wrong judgement or conduct as the wrong solution. But a division of solutions into right and wrong would be generally and justly found objectionable. What would loosely be called the "right" solution is simply the solution. What would loosely be called "a wrong solution" is no solution at all. The one expression is redundant ; the other is self-contradictory.

Yet this division, granted objectionable, is not idle. We must not abandon it without finding something to put in its place. Instead of the expression "right solution" let us be content with the word "solution". But what expression shall we substitute for the expression "wrong solution" ? What would loosely be called a "wrong solution", granted that it is something other than a solution, is not just anything other than a solution. What other than a solution is it ?

It may be safely called a "spurious solution". By so calling it we at least avoid representing it as a kind of solution. But what relation of spurious to genuine solution distinguishes a spurious solution from what is neither a genuine nor a spurious solution ?

A spurious solution, I submit, is anything that, not being a solution, is yet *tendered as a solution*. By this, I need hardly explain, I do not mean *asserted to be a solution*. But there is

another meaning which my purpose makes it important to disclaim. I also do not mean *judged to be a solution*.

The coin spinner's spurious solution that he will throw hh is not his judging "that he will throw hh" to be a solution, but his judging that he will throw hh. We may grant that the thinker who judges that he will throw hh is ready to judge, we may grant, though surely we need not, even that he inevitably does judge, this judgement to be a solution. We must insist that the judgement judged to be a solution be distinguished from the judgement "this judgement is a solution".

There is therefore no objection to be found in this quarter against the position that as right judgement is a solution of a theoretical problem and right conduct is a solution of a practical problem, so judgement in general is a tender of something, whether it is or not, as a solution of a theoretical problem and conduct in general is a tender of something, whether it is so or not, as a solution of a practical problem. The thinker is necessarily ready to judge what he tenders as a solution to be a solution. The agent is not necessarily ready, though many philosophers have proceeded as if he were, to judge what he tenders as a solution to be a solution. This difference between the relation of judgement to judgement about judgement and the relation of conduct to judgement about conduct affords a basis for no valid objection against my claim that what is tendered as a theoretical solution and what is tendered as a practical solution are in the same sense *tendered as solutions*.

¹ A spurious solution, whether intellectual or moral, may be said to be a failure, but a spurious solution cannot [. . .] be explained [?]. For a failure in relation to an obligation is not the same as a failure in relation to an aim. The latter, not the former, is opposed to success. A genuine solution accordingly is [not the same as] a successful one. One may fail, make an unsuccessful attempt, to judge rightly without [thereby] judging wrongly. One may judge wrongly without unsuccessfully attempting; because without attempting at all one may judge rightly. By no means all wrong judgement is the outcome of unsuccessful enquiry. Much of it indeed is conditioned by a failure to enquire.

While theoretical error is always involuntary, practical error—despite Socrates—is never involuntary. That all wondering aims at the solution of a problem is plausible only because deliberation is not [?] distinguished from enquiry. Of enquiry the aim is

¹ The remainder of this section seems to consist of rough jottings.

fixed. But deliberation has no aim beyond the fixing of an aim. Failure to keep a promise is not dependent on an attempt to keep it. And keeping a promise is not success in keeping it.¹

With the distinction between true and false judgement, the distinction between right and wrong judgement is neither identical nor coincident; with the distinction between evidenced and unevidenced judgement, the distinction between right and wrong judgement is coincident but not identical. That with which the distinction between right and wrong judgement is identical, is the distinction between *a theoretical solution and anything that, not being a theoretical solution, is yet tendered as a theoretical solution*.

A right judgement must be a true judgement because it must be evidenced. A right judgement must be evidenced not because it is a solution but because it is a theoretical solution.

The distinction between right and wrong conduct is the distinction between *a practical solution and anything that, not being a practical solution, is yet tendered as a practical solution*. A practical solution not only need not, it cannot, be evidenced. What, instead of evidenced, a practical solution must be, I am not yet ready to say. Not the generic analogy between conduct and judgement, but only the specific analogy between conduct and inference, will reveal that to which a practical solution must be related as a theoretical solution must be related to evidence.

6. CHOICE.

The general analogy between conduct and judgement is the foundation of a special analogy between conduct and inference. The general analogy I have already tried to explain, establish and exploit. Challenging the common assumption that problems as such are theoretical, and that of every problem the solution is a judgement, I have advocated a division of problems into theoretical and practical, contending that of only some problems is the solution judgement and of other problems the solution is conduct. Thus resembling judgement in general in being the solution of a problem, conduct, I must now try to show, further resembles inference in particular in being a reasoned solution of a problem.

Inference and reasoning are commonly identified. But inference is theoretical reasoning, reasoned judgement. If all reasoning is inference, this is because all reasoning is theoretical,

¹ There appears to be a lacuna after this paragraph.

because only judgement is reasoned. Now it is a fact that only solutions are reasoned. And this fact is commonly recognised. Hence the common assumption that of every problem the solution is judgement involves the assumption that only judgement is reasoned. Our rejection of the fundamental assumption sets us free to question the derivative assumption. Once beside judgement as theoretical solution we place conduct as practical solution, we may ask whether conduct may not as well as judgement be reasoned, whether reasoning may not be practical as well as theoretical.

Some but not all judgement is reasoned. Perhaps all conduct, perhaps none, perhaps some but not all, is reasoned. Reserving impulsive conduct, I shall confine myself (for the present) to deliberate conduct. I shall begin by identifying deliberate conduct with choice.

Undertaking to exhibit inference as a species of judgement, we can fairly take for granted that your judging what you infer, whether or not identical with, is at least indispensable to your inferring it. Undertaking to exhibit choice as a species of conduct, we cannot similarly take for granted that your doing what you choose to do, whether or not identical with, is at least indispensable to your choosing to do it. That you infer only what you judge it would be eccentric to deny, eccentric even to question. That you choose to do only what you do, it would be eccentric to affirm, eccentric even to suggest. Man, we should be reminded, proposes; God disposes. But an agent who does whatever he chooses to do must [surely] be omnipotent?

No. He need not be omnipotent. He need not be able to do more than what he chooses to do. And this may be little or nothing. The peculiarity of an agent who does whatever he chooses to do is not omnipotence, but only recognition of his own limits. I can't stop the sun, but I also can't choose to stop the sun. Not because I can't stop it, but because I judge that I can't stop it.

But infallible recognition of one's own limits is perhaps as rare as omnipotence. Certainly it is not involved in the concept of choice. The agent may choose to do something but, even though he does not change his mind, he may be prevented by some unforeseen impediment from doing what he chooses [? chose] to do. He may lose his life in an unsuccessful attempt. Paralysed limbs when we choose to move them to the right may turn on the contrary to the left.*

* Aristotle, *Eth. Nic.* 1102B, 18-20.

Is it not then abundantly evident that your doing what you choose to do, so far from being identical with, is not even indispensable to your choosing to do it ; that even where the agent does what he chooses to do, he first chooses to do it and only later does it ; that this time interval between choosing and doing provides plenty of opportunity for even the most cautious agent to fail to do what he has chosen to do ; and that even where this time interval is infinitesimal, choice may still miscarry ? Yes : These are incontestable facts recorded ¹ [?] in ordinary language.

Not only minds but also bodies are said to do, act, behave. And not only animate but also inanimate bodies. I am concerned, however, with the doing, action, behaviour only of persons. And the extravagant position attributing the bare movements of animate bodies to persons may perhaps be fairly dismissed without discussion. The paralytic who chooses to move his limb to the right neither chooses nor intends to move his limb to the left. And, although his limb moves to the left, he does not move his limb to the left. So far we enjoy the support of careful speakers. But we play a lone hand if we go on to say that, although his limb does not move to the right, he yet moves his limb to the right. Careful speakers will say rather that he does nothing at all.

It is partly with a view to the exclusion of [such] consequences that I have preferred where possible the word "conduct" to the word "act". At the cost of some convenience. "Conduct" cannot, as can "act", be preceded by the indefinite article, nor can it occur in the plural. And there is no word related to "conduct" as "act" is related to "behaviour". A man's behaviour throughout an interval (of time) is the series of his acts. But units of conduct are nameless. This inconvenience has set against it the fact that nobody speaks of the conduct of bodies, whether animate or inanimate. Nobody will say that the conduct of a paralytic, as distinct from the effect of his conduct, is in any way peculiar.

I will not claim that you choose to do only what you do. I will claim instead that you choose to do only what you *try* to do, only what you *do so far as in you lies*. But this claim suffices for my purpose. For what I have undertaken is to exhibit choice as a species of conduct, not of action or behaviour. Whether or not deliberate conduct is identical with choice, deliberate conduct is at least indispensable to choice. The terms are given and only the relation between them requires to be ascertained.

¹ The MS. reads 'recd'.

My diagnosis of inference as a species of the genus judgement was at the same time a diagnosis of inference as a species of the genus reasoning. My diagnosis of choice as a species of the genus conduct will be at the same time a diagnosis of choice as a species of the genus reasoning. Not that either the genus judgement or the genus conduct is to be identified with the genus reasoning. But I have diagnosed inference as reasoned judgement and shall diagnose choice as reasoned conduct. And what from one point of view is counted as the [a ?] differentia may from another point of view be consistently counted as the genus. A diagnosis, *e.g.*, of Woman as female species of the genus adult is at the same time a diagnosis of woman as adult species of the genus female. The difference between the two formulae is a difference only of emphasis. The woman who, preoccupied with her age, neglects her sex and the woman who, preoccupied with her sex, forgets her age need to be reminded of different facts. Granted, I may say to my wife when I want her not to do something she wants to do: "You are adult, you are a female adult". Granted, when I want her to do something she does not want to do, I may say to her: "You are female, you are an adult female". Discreet moderation may be a very different thing from moderate discretion, but a reasoned judgement, reasoned theory, is exactly the same thing as theoretical reasoning; and reasoned conduct, reasoned practice, is exactly the same thing as practical reasoning.

My diagnosis of choice as reasoned conduct or practical reasoning being thus closely parallel to my diagnosis of inference as reasoned judgement or theoretical reasoning, my exposition of the former might be expected to follow my exposition of the latter no less closely. But an exposition must be fashioned with an eye not only to the view expounded but also to the view challenged. And the prevalent misconceptions challenged by my diagnosis of inference and by my diagnosis of choice are divergent. I hold that inference and choice are co-ordinate species of reasoning. What I find held is that reasoning is entirely the same as inference and entirely different from choice.

Those, indeed, who view inference as a species not of judgement but of transition from judgement to judgement, will also view choice as a species not of conduct, but of transition from judgement to conduct. And here the fundamental error is the same. Guidance by judgement, whether of judgement or of conduct, is misconceived as causation by judgement. Now I hold that to reason is simply to be guided by judgement. Hence, though inference is, while choice is not, universally admitted to be reasoning, I feel justified in saying that those who misconceive guidance

by judgement as causation by judgement no more conceive inference than they conceive choice as reasoning.

But this misconception, once lamentably common, is yet mercifully far from universal. And of those who avoid this misconception by no means all, if any, conceive choice as reasoning. I have accordingly to fashion my exposition of my diagnosis of choice for some who do not conceive choice as reasoning, though they do conceive inference as reasoning.

From these, however, I expect the concession that to reason is simply to be guided by judgement. Inference, accordingly, is not to be sheerly identified with reasoning. Inference is a species of reasoning, even if the sole species of reasoning. It is a species of reasoning because it is not just anything guided by judgement, but judgement guided by judgement. Conduct guided by judgement would, just as much as judgement guided by judgement, be reasoning. Choice would be a second species of reasoning if choice were conduct guided by judgement. If inference is the sole species of reasoning, it is still so only because conduct cannot, and nothing but judgement can, be guided by judgement. Those who withhold this concession I number among those who, however they bestow the word 'reasoning', no more conceive inference than they conceive choice as reasoning.

Once this is conceded, is further resistance possible? Can anyone, who sees that inference is judgement guided by judgement, yet not see that choice is conduct guided by judgement?

Can anyone, who masters the fact that to infer q from p is to judge q not because you judge p but because p , yet not master the fact that to choose to do something on ground p is to try to do it not because you judge p but because p ? Can anyone, who understands what it is to treat something taken to be fact as a reason for thinking something else to be fact, yet not understand what it is to treat something taken to be fact as a reason for trying to do something? Can anyone, in short, who succeeds in conceiving inference as theoretical reasoning, yet fail to conceive choice as practical reasoning?

It is hard to see how anyone who thus succeeds can yet thus fail; it is easy to see that all must somehow thus fail who are dominated by the assumption that of every problem the solution is judgement. And these, unlike those who misconceive guidance by judgement as causation by judgement, are all who have published attempts to diagnose choice. Failing to set beside the problem whose solution is judgement other problems whose solution is conduct, failing to set practical problems beside theoretical problems, failing accordingly to set practical solutions

beside theoretical solutions, they inevitably fail to set practical reasoning beside theoretical reasoning, reasoned conduct beside reasoned judgement. But if, though succeeding in conceiving inference as reasoned, they fail to conceive choice as reasoned conduct, as what do they conceive choice?

How their conception of deliberation is accounted¹ to a failure to grasp practical wondering we have already seen. To failure to grasp practical reasoning their conception of choice can only be on the same lines accounted [?]*. Those who allow deliberation to involve wonder only so far as deliberation involves enquiry will allow choice to involve reasoning only so far as choice involves inference. They will say that the agent wonders whether to pay his tailor only so far as he wonders, *e.g.*, whether by paying his tailor he would promote his own happiness, or whether by paying his tailor, he would promote happiness in general, or whether by paying his tailor he would be acting rightly. Saying this, they will say also that the agent's choice to pay his tailor is guided by judgement only so far as his judgement is guided by his judgement, *e.g.*, that by paying his tailor he would promote his own happiness, or would promote happiness in general, or would be acting rightly.

But the agent who wonders only whether paying his tailor would promote his own happiness wonders not at all whether to pay his tailor. And, if nothing but the agent's judgement that by paying his tailor he will promote his own happiness is guided by his judgement, then his choice to pay his tailor is guided by judgement not at all. Nor could we even confuse such enquiry with such deliberating or such guidance of judgement with such guidance of conduct, except by postulating an agent who has already made up his mind so to act as to fulfil a given condition. I have also urged that, whatever condition he selected, the agent may wonder whether so to act as to fulfil it, and makes up his mind so to act only if he thus wonders. Instead of an agent who has already made up his mind so to act as to promote his own happiness, let us postulate an agent who has already satisfied himself that by paying his tailor he would promote his own happiness and who wonders whether to pay his tailor only in the light of this condition.

Such wonder, I have already urged, has nothing to do with enquiry. Such wonder, I have already insisted, is the whole of pure deliberation. What has now to be diagnosed is the solution in which such wonder may culminate, the pure practical solution

¹ The MS. reads 'acctd'.

of a pure practical problem. And, supposing the agent's wonder to culminate in the choice to pay his tailor, what I now urge is that the agent chooses to pay his tailor precisely because by paying his tailor he will promote his own happiness. The agent's judgement that by paying his tailor he will promote his own happiness may in turn be guided by judgement. Or it may not. Its guidance by judgement is beside the point. Whether this judgement is or is not in turn guided by other judgements, the agent's choice is guided by *this* judgement. And the guidance of the agent's choice by this judgement owes nothing to the guidance of this judgement by other judgements. This judgement is indispensable to this choice. But it is futile to try to unload on to this judgement the burden which only this choice can bear.

The ground of a choice may be also the conclusion of an inference. So may the premise of one inference be also the conclusion of another. The conclusion of the former inference is then *remotely* guided by the premise of the latter. Where q is inferred from p and p is inferred from r , just because the judgement that p is *proximately* guided by the judgement that r , the judgement that q may be said to be *remotely* guided by the judgement that r . Yet this is not simply because the judgement that p is proximately guided by the judgement that r , but because the judgement that q is also proximately guided by the judgement that p . It is plain that the bare consideration that the judgement that p is proximately guided by the judgement that r , without the supporting consideration that the judgement that q is guided, whether proximately or remotely, by the judgement that p , could do nothing to establish the claim that the judgement that q is remotely guided by the judgement that r . If therefore a question were raised about the nature of the guidance-by-judgement of the judgement that q , it would be idle to seek to explain away the seemingly proximate guidance of the judgement that q by the judgement that p , as reducible to the remote guidance of the judgement that q by the judgement that r .

To seek to explain away the single proximate guidance of conduct by a ground of choice as reducible to a remote guidance of conduct by a premise from which the ground of the choice is inferred is no less idle. The bare consideration that the agent's judgement that by paying his tailor he would promote his own happiness is the conclusion of an inference, can do nothing towards establishing the claim that the agent's payment of his tailor is remotely guided by judgement. It must be supplemented by the consideration that the agent's payment of his

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tailor is guided, whether proximately or remotely, by his judgement that by paying his tailor he would promote his own happiness. And, once this is conceded, the question whether, and if at all by what, his judgement that by paying his tailor he would promote his own happiness is guided, the question whether the ground of his choice is also the conclusion of an inference, must be recognised to be wholly irrelevant. As the thinker judges that *q* because *p*, so the agent chooses to do something because by doing it he would fulfil a given condition. As inference is judgement proximately guided by judgement, so choice is conduct proximately guided by judgement. If I have established this contention, I have established the claim that, as inference is to be diagnosed as theoretical reasoning, so choice is to be diagnosed as practical reasoning. But I have not yet diagnosed choice as practical reasoning as I have already diagnosed inference as theoretical reasoning.¹

The decision to do *q* because *p* involves the decision to do *q* if *p*. What is the value of this hypothetical decision? And how is it involved [?]? Unlike the judgement that *p*, this decision does not guide. Unlike the decision to do *q* because *p*, it is not guided.

To the corresponding questions about inference I have already ventured an answer. If "*q* because *p*" involves the judgement that "if *p* then *q*", what is the nature of this hypothetical judgement and how is it involved? Unlike the judgement that *p*, it is not a premise. Unlike the judgement that *q* it is not a conclusion. It is involved in the same way as a premise and it is [?] an intellectual judgement.²

If this diagnosis of inference as theoretical reasoning is to be a model for the diagnosis of choice as practical reasoning, the model must be followed faithfully without being followed slavishly. What has to be diagnosed is a different species of the same genus. We follow our mode faithfully only if we retain the old genus. We follow slavishly unless we seize the new differentia. We must not forget that choice, like inference, is reasoning. We must also not forget that choice, unlike inference, is conduct.

The deficiency of language bids fair to perpetuate the deficiency of diagnosis to which it is due. The only available remedy is, clinging to the neutral word "reasoning" as an uncovenanted mercy, to formulate the diagnosis of "choice" in terms of the

¹ A space is left after this paragraph in the MS.

² The text reads 'Invd same way as prem [?]t] is int. j'.

diagnosis of "inference". There is no word related to "intuition" as "reasoning" is related to "inference". There is no word related to "intuition" as "choice" is related to "inference". But (we may coin) the phrases "that which is related to intuition as reasoning is related to inference", and "that which is related to intuition as choice is related to inference".

There are no words exactly meeting the need. But there are words inexactly meeting the need. And, once exact formulae have done their work, these words can conveniently be made to serve. Simply to make a decision to fulfil the given condition is not to choose. What is its ordinary designation? It is to *resolve*. But what is ordinarily called resolving includes, besides what we want, something we do not want. It includes what we have defined as choice. We are said to resolve, but not to choose, *e.g.*, so to act as to promote happiness. But we are said to resolve, as well as to choose, *e.g.*, to catch a train to-morrow. I propose so to modify the ordinary usage as to restrict the word "resolution" to such choices. Whether we choose or resolve we *make up our minds, decide*.

¹ The reasoned decision to do *q* because *p* involves, besides the judgement that *p*, the decision to do *q* if *p*. This decision, provided the reasoned decision formulated by the words "to do *q* because *p*" is completely so formulated, must be *unreasoned*.

A reasoned decision formulated by the words "to do *q* because *p*" may, however, only be incompletely so formulated and may be completely formulated only when formulated in the words "to do *q* because *p* and *r*". And this reasoned decision of course involves, besides the judgement that *p* and *r*, not the unreasoned decision to do *q* if *p*, but the unreasoned decision to do *q* if *p* and *r*. Now the unreasoned decision to do *q* if *p* and *r* may also be formulated in the words "to do *q* if *p* if *r*". So formulated, it is easily recognised as an unreasoned decision involved by the reasoned decision to do *q* if *p* because *r*. Accordingly, the agent who decides to do *q* if *p* only because *r* decides to do *q*, if at all, not simply because *p* but only because *p* and *r*.

There is another way in which the decision formulated in the words "To do *q* because *p*" may be incompletely so formulated. What is so formulated may be completely formulated only when formulated as the conjunction of (1) the inferential judgement

¹ [The following sentences appear to be a parenthesis or perhaps a footnote.] What is formulated as "the decision to do *q* because by doing it the agent would promote his own happiness" may be the decision to do *q* because it would promote his own happiness *and* would not retard [?] anyone else's happiness.

" r because p ", involving the non-inferential judgement " $\text{if } p \text{ then } r$ ", (2) the reasoned decision to do q because r , involving the unreasoned decision to do q if r .*

The hypothetical decision involved by choice, reasoned decision, like the hypothetical judgement involved by inference, reasoned judgement, is unreasoned. To say this is to say of what kind it is *not*. Of what kind *is* it? The question about unreasoned judgement is answered by saying that it is intuitive judgement. But to say that unreasoned decision is intuitive decision would be like saying that reasoned decision is discursive.

Intuition, like inference, is a species of the genus judgement; not, like reasoning, a genus susceptible both of a theoretical and of a practical differentia. If for this reason "intuitive" will not do, no other word will exactly do instead. We need a word which is to "intuitive" as "choice" is to "inference". We should also be glad of a word which is to "intuition" as "reasoning" is to "inference". But neither for the genus of which intuition is one species (as inference is one species of reasoning) nor for the species co-ordinate with intuition (as choice is a species co-ordinate with inference) has language provided exact designations.¹

How involved? Not as the ground or conjunction of the grounds.² But here we can no longer follow our account of inference. It was worth while to show that q cannot really be inferred from the premise, if p then q , for though " $\text{if } p \text{ then } q$ " cannot be the premise of such an inference, it can of other inferences. But the decision to do q if p can be the ground of no decision. In general, no decision can be the ground of any decision. Like theory, practice can be guided. Unlike theory, practice cannot guide.

No doubt the thinker may inferentially judge q because he has decided to do p . No doubt the agent may decide to do q because he has decided to do p . But the premise of the inference and the ground of the decision is not the previous decision, but the judgement that he has decided.

The hypothetical decision involved by choice is moreover not,

* What is formulated as "the decision to do q because by doing q the agent would promote happiness in general" may be a conjunction of (1) the judgement that by promoting happiness in general he would promote his own happiness (2) the decision to do q because by doing q he would promote his own happiness.

¹ There appears to be a lacuna here. The next paragraph begins abruptly in the middle of a discussion.

² MS. reads 'How invd? Not as grnd or conjt of the grnd?'

like hypothetical judgement, reducible to alternative decision; for example, the hypothetical decision to pay one's tailor if by paying him one will promote one's own happiness. But the hypothetical decision if not to pay the baker then to pay the tailor is equivalent to the alternative decision either to pay the baker or to pay the tailor.

Hypotheticals are equivalent to alternatives :

(1) Where both antecedent and consequent are theoretical, as in hypothetical judgement they must be.

(2) Where both antecedent and consequent are practical, as in hypothetical decision they may be ; not where, as in the hypothetical decision involved by choice, the antecedent is theoretical and the consequent practical.

Where you treat *p* as a reason, whether for judgement or for conduct, you judge that *p*. The premise of an inference, the ground of a choice, is a judgement. The thinker infers *q*, the agent chooses *q*, not *if* but *because p*. Among questions that may legitimately be raised about any given inference or choice are questions about the nature of the judgement that is the premise or ground. But no question about the nature of the judgement that is the premise or ground may legitimately be raised about inference or choice in general. The systematic study of inference and choice must abstract from the judgement of the premise or the ground and must confine itself to the relation between this judgement and the judgement or conduct guided by it. The problem presented by inference is the nature of the disposition not to judge *p* or [else] to judge *q*. The problem presented by choice is the nature of the disposition not to judge *p* or [else] to conduct oneself in a certain way. What makes the thinker actually infer or the agent actually choose where he judges *p* is not a further problem, and the problem of the judgement that *p* is no more than the problem of judgement in general.

Even logicians have not always fully appreciated the irrelevance of the judgement of the premise. But moralists have been exclusively preoccupied with the judgement of the ground. And this exclusive preoccupation with what is wholly irrelevant is the penalty of failing to grasp the pure practical problem.

It is widely recognised that choice involves deliberation. It is also widely recognised that choice involves reasoning. But as philosophers have treated deliberation, practical wondering, as a species of enquiry, theoretical wondering, so have they treated choice, practical reasoning, as a species of inference, theoretical reasoning. And all this has been made plausible by the substitution of the theoretical for the practical problem.

The ground of a choice may be reasoned. So may the premise of an inference. Like the premise of an inference, the ground of a choice is a judgement. Where reasoned, it is theoretically reasoned, inferred. The study of choice has been preoccupied to a greater extent and at a greater cost with the establishment of grounds of choice than has the study of inference with the establishment of premises of inference.

I have said that the practical problem is distinguished from the theoretical problem as *whether to do this* from *whether this is the case*. One may infer q from a premise p , but may also need to infer p from r . Similarly, one may choose to realise x on the ground p , but may also need to infer p from r . And as your ultimate reason for judging that q may be said to be r , so your ultimate reason for choosing to realise x may be said to be r . As the theoretical problem whether q is resolved into two theoretical problems, so the practical problem whether to realise x is resolved into two problems, one practical and one theoretical. The danger is that the theoretical problem may seem to be the sole problem.

7. END AND MOTIVE.

Preoccupied with the distinction between End and Means, ethical writers neglect the distinction between End and Motive. Yet it is only in order to appreciate the distinction between End and Motive that it is worth while to mention the distinction between End and Means. The distinction between End and Motive is a distinction between two ethically relevant concepts. The distinction between End and Means is a distinction between an ethically relevant and an ethically irrelevant concept.

What the agent chooses is to do something. To do something is to realise something. What the agent chooses is, accordingly, to realise something. What is done is not what is realised but the realising it. The End is simply what the agent chooses to realise.

"Simply what the agent chooses to realise." But is this not at least sometimes only a means to an end? Never. For we must distinguish between choice and intention. Closely connected with conduct, intention is not itself conduct but judgement. To intend to realise something is to judge that you will realise it. Now, while the agent no doubt intends to realise all he chooses to realise, all the agent intends to realise may be more than all he chooses to realise.

An agent who judges both that he will realise O_1 and that he

will realise O_1 only if he realises O_2 inevitably judges that he will realise O_2 . His intention to realise O_1 insures¹ his intention to realise O_2 . Accordingly his choice to realise O_1 insures his intention to realise O_2 . But his choice to realise O_1 does not insure his choice to realise O_2 . So far indeed from insuring, his choice to realise O_1 precludes his choice to realise O_2 . For the question whether to realise O_2 is no longer open.

But what if, having already chosen to realise O_1 , you only later judge that you will realise O_1 only if you realise O_2 ? Is the question whether to realise O_2 not then for the first time open? Only if the question whether to realise O_1 is for the second time open. Only by changing your mind, by reconsidering your earlier choice to realise O_1 , can you consider whether to realise O_2 .

There is an even more formidable² case. Choosing to realise O_1 , you may judge both that you will realise O_1 and that you will realise O_1 only if you either realise O_2 or realise O_3 . Granted that the question whether or not to realise O_2 or O_3 is no longer open, the question whether to realise O_2 or to realise O_3 is surely open. May you not then proceed to choose to realise O_2 or to choose to realise O_3 ?

We must admit at least that the question is open. But it is worth while to notice the possibility that the question may remain open. Suppose you are equally convinced that you will realise O_1 if you realise O_2 and that you will realise O_1 if you realise O_3 . You may find yourself unable to settle the question, simply because, though you have a reason for settling it, you have no reason for settling it this way rather than that. But O_2 may attract or O_3 may repel; and you may then, besides choosing to realise O_1 , choose to realise O_2 or choose not to realise O_3 . Here, however, O_2 or not- O_3 is besides O_1 your end.

An end, I therefore submit, is sufficiently defined as what an agent chooses to realise. That the qualification "for its own sake" is at best redundant of course follows. But this qualification is worse than redundant. And what I propose now to maintain is not the redundancy of this qualification but its inapplicability to ends.

No doubt the agent always chooses for the sake of something. But, so far from being always, the end is never that for the sake of which the agent chooses. The agent never chooses to realise anything for its own sake. Nor does the agent ever choose to realise anything for the sake of his realising it. An agent never chooses, in other words, either to do or to realise anything for its

¹ The text has 'ins', 'insg' etc.

² 'Formd' in the manuscript.

own sake. For both what the agent chooses to do and what the agent chooses to realise are particulars, while that for the sake of which the agent chooses is always a universal. That for the sake of which the agent chooses is not an end but a motive.

Everyone will concede both that what the agent *does* and that what the agent *realises* is always a particular and never a universal. What the agent does is not a *kind of act* but an *act of a kind*. What the agent realises is not a kind of object but an object of a kind. But what the agent chooses to do is less than what he does. And what the agent chooses to realise is less than what he realises. Perhaps no one, certainly not everyone, will concede either that what the agent *chooses* to do, or that what the agent *chooses* to realise, is also a particular and never a universal.

May not the agent choose, for instance, to fulfil a promise? He may. And not only what the agent chooses to do but also what he does may be to fulfil a promise. But everyone will concede that what the agent *does* is never exhaustively describable as the fulfilment of a promise. For a promise is a promise to do something distinct from the fulfilment of the promise, and the agent fulfils the promise only in doing what he has promised to do. Now what the agent chooses to do is also never exhaustively describable as the fulfilling of a promise. His choice is not simply to fulfil a promise, but to do *this*, because by doing this he fulfils a promise.

What the agent chooses to realise may be an object of desire. And what the agent realises may be an object of desire. But neither what the agent realises, nor what he chooses to realise, is ever simply an object of desire. The agent does not simply choose to realise *this*, because it is an object of desire.

8. THE DEFINITION OF RIGHTNESS.¹

... I spoke of a difficulty, of seeing why *triangle* should be defined rather as a three-sided than as a three-angled plane rectilinear figure. But perhaps "triangle" could equally be defined in either of these ways. What I want now to point out is that either way you do two things: (1) You distinguish in the nature of a triangle an element common to certain other things. A triangle is a plane rectilinear figure. So is a quadrilateral. (2) On this basis you proceed to distinguish in the nature of a triangle an element which, whether or not common to any things, is not common to any of *these* other things to which the first

¹ This begins abruptly. It seems to be part of a series of lectures.

element is common. A triangle may not be the only thing that has three sides (angles). But it is the only plane rectilinear figure that has.

This is called defining *per genus et differentiam*. You assign first a genus, kind, to which what you are defining belongs; and secondly a differentia, a character distinguishing what you are defining from all others belonging to the same genus.

This process is also called analysis. To analyse (in thought) is to distinguish elements in a complex. The genus and the differentia are different elements in the nature of what is defined *per genus et differentiam*.

All this has no special connection with words. It is only when you are insisting, as I am not, on defining a triangle as three-sided rather as three-angled that you may find yourself compelled to seek refuge in the question what the word "triangle" means.

Now with *triangle* or *triangularity* contrast *colour*. In this you cannot distinguish different elements, because they are not there. Colour is something simple and not a complex. You can of course easily make the word serviceable for a child or foreigner unfamiliar with the English language. Put before him a red cube and a red sphere. These differ in shape but agree in colour. Then put before him a red cube and a green cube. These agree in shape but differ in colour. Proceeding on these lines, you will soon make the word "colour" as serviceable for him as for yourself; provided he can see and is not colour-blind. If he is thus disabled, no power on earth can help him.

And now with both *triangularity* and *colour* contrast *redness*. Unlike colour, it is partly analysable, or definable; but unlike triangularity, only partly. We can assign its genus. It is a colour. But we cannot assign its differentia. We cannot say how (though we can in a way *see* how) it differs from other colours.

Such wholly unanalysable, indefinable things as colour are sometimes said to be *sui generis*, that is, of a kind of which nothing else is. Redness is not *sui generis*. Greenness and others are of the same genus.

With the help of these illustrations I can say both what it is that I mean when I claim that *moral rightness* is definable, and what it is that others mean when they claim that *moral rightness* is indefinable. The two claims are opposed as extremes. Others claim that moral rightness is not even partly definable. Accordingly, their claim is sometimes formulated thus: *moral rightness* is *sui generis*. My claim does more than deny this. What I claim is that *moral rightness* is wholly definable and analysable without any residue. I define moral rightness *per*

genus et differentiam. It is of a kind of which something else is. Its genus is rationality. But it is only one species of rationality. There is at least one other species. And the two species of rationality differ not as do redness and greenness, but as do triangularity and quadrilaterality. We can say how they differ. The one, moral rightness, is rationality of *choice*; the other is rationality of *inference*.

I do not undertake to define those concepts in terms of which I define moral rightness, *viz.*, rationality and choice. Whether either or both are definable I do not now say. But I do say this: While you may now, you will not presently, find either obscure.

Two further preliminary observations may prepare you for what is to follow. (1) The form of the expression "moral rightness" (also "moral obligation", but not "duty") is appropriate to the position that "moral rightness" is definable. Indeed one might say that we do not even need to search for a definition. The expression (or some expressions) by which we ordinarily label our concept, is already a definition. And *per genus et differentiam*, *moral rightness* is one species of *rightness*, differing from other species in being moral.

Why then is the definability of *moral rightness* widely rejected? How can its indefinability be even plausible? To this we must reply: The form of a given expression is by no means decisive. The expression consists of a noun and a qualifying adjective. We may go further. The *same* noun occurs with *other* qualifying adjectives. Let us concede, even, that besides the expression *moral rightness* there is current [never widely?] the expression "intellectual rightness". It is still possible that these expressions do not require *rightness* to be a genus of which *moral* and *intellectual* rightness are species. There is an alternative possibility. Perhaps the word "rightness" is ambiguous and the function of the adjectives is, not to distinguish the species of a genus, but to distinguish the meanings of a word. For example, you must, instead of relying on the unqualified noun "leaf", seek to preclude the possibility of misunderstanding by using the expression "leaf of a tree", or "leaf of a book" or "leaf of a table". And here surely what we have are three different meanings of the ambiguous noun "leaf", rather than three species of the genus "leaf".

We may add that the position of those who hold moral rightness to be indefinable is apt, in consequence, to be understated. Having once distinguished "moral rightness" as one meaning of rightness they consider themselves at liberty, in an ethical

context, to use the unqualified noun "rightness" with this meaning. So using it, they say simply that *rightness* is indefinable, *sui generis*. Now I shall never allow the unqualified noun "rightness" to deputise for the expression "moral rightness". And, while claiming that *moral rightness* is definable, I do not claim that rightness, its genus, is definable. There is some danger therefore that the issue may be suppressed. My opponents say that *rightness* is indefinable. I deny not what they say but what they mean. They mean that *moral rightness* is indefinable. The word "duty" may here help to bring out what is in dispute.

(2) Anyone who claims, as I do, that a supposedly indefinable concept is definable, may be expected to occupy himself mainly in defending the definition he champions by showing that the supposedly indefinable concept does satisfy this definition. Now I must confess that I have hardly at all occupied myself in this way. Nor do I think it impossible that I may some day need thus to occupy myself. But the definition I champion has this peculiarity. Those who hold that moral rightness is indefinable have not considered my definition. And, if confronted with my definition, they would reply not merely that *moral rightness* does not satisfy this definition, but that nothing could satisfy it. Indeed my definition will strike those who encounter it as self-contradictory. The differentia, they will protest, conflicts with the genus. There can be no rationality of choice. Inference is rational or irrational [? valid or invalid] : choice is neither.

Thus before you can even consider whether my definition is a defensible definition of *moral rightness* you must consider whether it is a defensible definition of anything at all. And it is in trying to clear up this fundamental point that I have mainly occupied myself. So far as I can see (I have looked at the question from many points of view) I have succeeded in establishing my case beyond all possibility of dispute. But only this one thing, that I am supremely confident that choice can, indeed must, be rational or irrational [? valid or invalid¹.] And in exactly the same sense of these words as that in which inference must be rational or irrational [? valid or invalid¹]. Whether, this fundamental claim being once admitted, *moral rightness* is to be identified with rationality of choice [validity¹ of choice ?]—this is certainly a further question. And I am less than fully

¹ Difficulty in reading R.J.'s abbreviations. I am inclined to think he meant 'valid or invalid'. For he appears to write 'Inf (= inference) v or inv' (at end of previous paragraph). The last word looks like 'inv' rather than 'irr'.

confident that *moral rightness* is simply rationality of choice [? validity¹ of choice]. But even here I fancy I am at least very near the mark. Further refinement and qualification may be required. For instance, perhaps moral rightness is not to be found only in choice. Perhaps impulsive, as well as deliberate, action can be morally right. But if so this is because even impulsive action is related in some significant way to choice. If *rationality of choice* [? validity¹ of choice] is not the true definition of *moral rightness* (as I do not admit) it is at least the heart of the true definition. Nobody, I fancy, who once grasps the concept of rationality of choice [? validity¹ of choice] will suggest that this is nothing to do with moral rightness, that it is not even on the track of moral rightness.

Everyone must have been at some time tempted to identify the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct. Not everyone has yielded to the temptation. But those who have not must be supposed rather to have resisted the temptation than never to have been tempted. It must be admitted that, of those whose path to the position that *moral rightness* is indefinable leads through a refutation of attempts to define it, most say little or nothing about the attempt to identify the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct. But their reticence is perhaps a compliment to their readers. They have so easily resisted the temptation themselves that they suppose their readers to require no aid in resisting it.

What I advocate is that we yield to the temptation. But unlike those who have yielded, let us first appreciate the standpoint of those who have resisted.

Dominated by the assumption that only judgement can be fundamentally [?] reasonable or unreasonable, they distinguish the distinction between reasonable and unreasonable conduct from the distinction between reasonable and unreasonable judgement. They do not ask themselves *whether*, they ask themselves only *how*, the distinction between reasonable and unreasonable conduct must be distinguished from the distinction between reasonable and unreasonable judgement. And not only those who have resisted, but also others who have yielded, to the temptation to identify the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct have been dominated by the same assumption and have proceeded, more or less unflinchingly, on the same course.

¹ See note on P. 454.

The identification of the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct may be called "E.R." ¹

The distinguishing of the distinction between right and wrong conduct from a distinction between kinds of judgement may be called "E.I." ². The assumption that only judgement can be fundamentally reasonable or unreasonable, implying that the distinction between reasonable and unreasonable conduct must be distinguished from the distinction between reasonable and unreasonable judgement, may then be viewed as the assumption that E.R. must be based on E.I. And those who have resisted and those who have yielded to the temptation to identify the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct may be distinguished as (1) those who in order to reject E.I. reject E.R., (2) those who in order to accept E.R. accept E.I. What I want to do is to accept E.R. but to reject E.I. I want to identify the distinction between right and wrong conduct with the distinction between reasonable and unreasonable conduct. I do not want to distinguish the distinction between right and wrong conduct from a distinction between kinds of judgement. Accordingly, I do not want to distinguish the distinction between reasonable and unreasonable conduct from the distinction between reasonable and unreasonable judgement. I want to reject the assumption that only judgement can be fundamentally reasonable or unreasonable and to claim that conduct, as well as judgement, can be fundamentally reasonable or unreasonable.

How, then, do those proceed who distinguish the distinction between reasonable and unreasonable conduct from the distinction between reasonable and unreasonable judgement? The *locus classicus* is Hume's *Treatise*; and Hume's exposition of this distinction is, in my opinion, of far greater importance than any *positive* contribution he may have made to moral theory. Hume's own ethical position is only one of many ingeniously contrived retreats for those who reject E.R. It has perhaps received more notice than it deserves. What has received less notice than it deserves is Hume's forceful presentation of the case against E.R. And not only those who accept, those also who reject E.R. ought carefully to consider what Hume says: those who accept E.R., because they ought to refute Hume's argument; those who reject E.R., because they ought to follow Hume in facing the consequences.

¹ ? Ethical rationalism.

² ? Ethical intuitionism.

These consequences are highly paradoxical and deeply distasteful. But they really are consequences. And they are consequences not simply of rejecting E.R., but of the acceptance of something which commits us, whether we see it or not, to the rejection of E.R. They are consequences of the acceptance of distinguishing the distinction between reasonable and unreasonable conduct¹ from the distinction between reasonable and unreasonable judgement. And it is *this* that we must refute if we accept E.R.

Hume sees that to distinguish the distinction between reasonable and unreasonable conduct from the distinction between reasonable and unreasonable judgement is, in effect, to reject the distinction between reasonable and unreasonable conduct altogether, to reduce it to what he calls "A figurative and improper way of speaking". It follows that, as Hume says: "'Tis not contrary to reason to prefer the destruction of the whole world to the scratching of my finger. 'Tis not contrary to reason for me to choose my total ruin, to prevent the least uneasiness of an Indian or person wholly unknown to me. 'Tis as little contrary to reason to prefer even my own acknowledged lesser good to my greater, and have a more ardent affection for the former than the latter.'"* And it follows that, as Hume says: "Reason is, and ought only to be, the slave of the passions, and can never pretend to any other office than to serve and obey them."† Many moralists, when they hear these things said, throw up their hands in horror. But either we must join Hume in saying these things, or we must insist that conduct, as well as judgement, can be fundamentally [?]² reasonable or unreasonable.

[Three or four lines about the syllabus of this course of lectures omitted.]

. . . Nearly all moral philosophers, whether they accept or reject E.R., assume that only judgement can be fundamentally reasonable or unreasonable, and accordingly that the distinction between reasonable and unreasonable conduct must differ from the distinction between reasonable and unreasonable judgement. Hume was no exception. Hume too makes this assumption. Indeed, he clings to it with remarkable tenacity. For Hume's peculiar achievement is this: he clearly grasps the implications of the assumption and presents them in all their stark absurdity. Yet he never reconsiders the assumption that implies them. It is open to you to conjecture that there is in Hume's writing more

¹ "of acceptance of d. dist $\frac{r}{unr}$ cond . . ." MS.

* *Treatise*, Book II, Part 3, Section iii, p 316 in Selby-Bigge's edition.

† *Ibid.*, p. 315.

² 'fd' MS.

than meets the eye. Hume was a sly fellow. He gravely urges that the *most outrageous imaginable choices* are not *contrary to reason*, and urges this on the ground that the distinction between reasonable and unreasonable conduct must differ from the distinction between reasonable and unreasonable judgement. But you may conjecture that what Hume really thinks is, since such absurdities are implied by the assumption that the distinction between reasonable and unreasonable conduct must be distinguished from the distinction between reasonable and unreasonable judgement, this assumption must be abandoned. I do not myself favour this conjecture. But such questions I leave to historians. Never mind what Hume thought—least of all if he took such pains to conceal it. What we must mind is *our own* thinking. And what I shall urge is that Hume's account of this distinction between reasonable and unreasonable conduct is a *reductio ad absurdum* of the assumption that the distinction between reasonable and unreasonable conduct must be distinguished from the distinction between reasonable and unreasonable judgement—is this, whatever Hume intended it to be.

IV.

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IV.—FACTS, PROPOSITIONS, EXEMPLIFICATION AND TRUTH.

BY C. A. BAYLIS.

IN this paper I attempt to construct a theory of the nature of truth in terms of the relation of exemplification and its converse, characterisation. This theory is suggested by a number of our common sense beliefs which seem *prima facie* plausible. To be sure, philosophical analysis often shows that beliefs of this plausible sort may mislead us. But in this case the view about truth which they indicate is strongly supported if not required by some of the careful and detailed logical and epistemological studies of Frege, Russell, Lewis, Carnap, Church and others.

The view originates in the common sense belief that there are certain hard facts about the entities we experience. In the case of ordinary empirical knowledge these facts are fully concrete and particular. Going out into a rainstorm, for example, we become acquainted with some few aspects of the highly complex fact of fully particularised rain falling in a completely particularised way. Though we notice, and perhaps talk about, only certain features of this complex particular event, we believe that it has an indefinitely large number of characteristics. It is raining at a definite rate. Each raindrop is of a definite size and composition. The condition of the clouds above and of the ground beneath is also determinate. The spatio-temporal relations of each raindrop to every other object in the world is specific. There seem always to be further questions about the rainstorm which can be asked. Further, it is to concrete facts of this nature that we turn for answers to our questions about particulars. Such facts furnish the basis for accepting propositions about particulars as true or rejecting them as false.

By contrast the statements we make about these concrete empirical facts have only limited significance. They express propositions which are narrowly restricted and abstract. As Russell put it,¹ every meaningful sentence contains at least one term which signifies a universal. If we say, for example, that it is raining hard, we have abstracted one general feature from the complex empirical fact for consideration and communication.

¹ *Problems of Philosophy*, p. 146.

We thus express our belief in one abstract aspect of the total situation. What we believe is a limited and abstract meaning which can be communicated fully even to one who is unacquainted with the concrete fact.

What is the relation between such abstract propositional meanings and concrete particular facts? It is suggested by the following analogy. A general term such as "red" signifies the concept or universal, redness, and denotes all red things. Here we say commonly that the signified entity, redness, characterises the denoted entities, red things, and that, conversely, red things embody or exemplify redness, are instances or cases of redness. Similarly, a propositional expression, such as "A rose being red" signifies a general propositional meaning and denotes every fact which consist of an actual rose being red. Since the properties of propositions can be shown to be closely similar to those of concepts or universals, and the nature of facts to resemble in essential respects the nature of instances of universals, it seems a legitimate extension of ordinary language to say that true propositions characterise facts, and that these facts embody or exemplify the abstract propositional meanings they make true. The relation meant by the term "exemplify" is the one commonly signified in the literature of symbolic logic by " ϵ ". The relation symbolised by "characterise" is the converse of the epsilon relation.

It is a principal thesis of this paper that the relation between a true proposition and any fact in virtue of which it is true is in this sense one of characterisation and the converse relation one of exemplification. For example, the particular rain which is falling here now in a particular way is a concrete instance, embodiment, or actualisation, of the abstract meaning signified by "Rain falling here now". A false proposition, like an empty concept, has no instances. Just as what is signified by "two and a half dollar bill" characterises nothing actual, so a false proposition characterises nothing factual.

This view is incompatible with nominalism, but with slight modifications is compatible with any of the other traditional views about universals. I have sometimes expressed it in quasi-Platonic terms, but it could be transposed into a view consonant with Aristotelian realism or with conceptualism. In order to avoid emphasis on the differences among these views, I use the neutral term "character", rather than either the conceptualistic term, "concept", or the realistic one, "universal". Qualities, properties, and relations are species of characters.

Can a view such as this survive careful philosophical criticism?

Are there facts? Do their natures fit the requirements of this theory? Must we admit propositions? Are they really abstract? How can they be when often the expressions which signify them contain as constituents one or more terms which denote particulars, as for example in "Socrates was wise"? Does the analogy between propositions and characters and between facts and particulars hold in detail? Do propositions characterise facts? Can the account of empirical truth suggested above be extended to *a priori* truth? To a critical examination of these questions we now turn.

To begin with must we admit that there are such entities as facts? Can't we get along, objectively at least, merely with particulars? Will it not suffice to admit a red rose without agreeing also that there is a fact of the rose's being red? The answer appears to be "No". We have the same kind of evidence in immediate experience for facts that we do for particulars, namely direct awareness of them or of certain aspects of them.

To take a concrete example, let us suppose that within a given specious present we are aware of two sense-data, a large blue patch and a small red patch. Their discrepancy in size is such that we know with certainty in this case that the blue patch is larger than the red one. Our ground for this knowledge seems to be that we observe directly that it is larger. Now what we are aware of here is not merely a string of particulars but a fact, a relation holding between particulars. We are not aware merely of two patches and conjunctively added to them a relation. We are aware of a relation of a certain kind, larger than, holding between the two patches. This relation has a sense or direction and it has terms. The complex whole of the relation holding between its terms is a fact, a particular fact, if you like, but not a particular in the sense of a substance, like either of the patches.¹

As another example of a fact, consider simply the red patch of our previous example. We can perhaps observe it without noticing that it is red. But if we do notice that it is red we are observing its being red. Indeed, our ground for believing that a red patch is part of the content of our experience is our noticing that the patch we are observing has the character of being red. Observation of this fact is our evidence and our only evidence for asserting that this particular patch is a red patch. We cannot avoid admitting facts about particulars as well as particulars, because to describe a particular by means of an adjective is

¹ Even if a dyadic relation, say, be regarded as a class of ordered couples, neither an ordered couple nor a class of such couples should be confused with a particular in the sense of a particular substance.

simply one way of saying that the particular has, in the sense of exemplifies, the character signified by that adjective.

Facts are entities in relation. At the lowest level they are relations among particulars such as one patch or one building being larger than another, or they are relations of exemplification between particulars and the characters which characterise them, as for example a given patch being red. These are facts about particulars. They are concrete occurrences, events or states of affairs. At a higher level there are facts about characters, as for example the fact that the relation of implication is transitive. Implication has or exemplifies the character of transitivity.¹

It should be noted that relations among particulars are themselves either particulars or completely determinate characters of particulars. If John loves Mary the emotion he feels for her is not just love in general but a very special love, one which he at least believes to be unique. Whether actually unique or not John's love for Mary is either a fully determinate kind of love or a particular instance of that kind.² Similarly, the relationship of size between the blue patch and the red patch we were observing a little while ago is either a fully determinate relationship or a particular instance of such a relationship. When we observe relations among particulars, just as when we observe particular substances, we do not notice them in their full detail with all the many characters they have. Rather we notice only certain restricted aspects of them. And in our ordinary statements about them we are limited to expressing these restricted and abstract aspects. Thus, though the relationship of size between our two coloured patches is fully specific we notice and comment on only certain special features of this relation. We may say the blue patch is larger than the red one or we may say the red one is smaller than the blue one. But our ground for either statement is the fact which is the fully specific relationship of size between the two. This specific relation with its terms is an instance of the abstract state of affairs or proposition signified by "the red patch being smaller than the blue one" and also of the proposition signified by "the blue patch being smaller than the red one".

One important consequence of admitting facts about particulars as well as the particulars themselves, is that it makes possible

¹ Presumably the theory of types would require that this relation of exemplification be of a higher type than the corresponding relation between a particular and a universal.

² Which of these views is correct, I do not examine here. One of them reflects one theory of universals, and the other another.

a reasonable hypothesis as to the subjects of basic as contrasted with derivative value predicates. G. E. Moore has said of such value predicates that they are non-naturalistic, but he has failed to give a very satisfactory account of what distinguishes them from naturalistic predicates. Part of his meaning seems to be that they are not predicates of terms which signify particulars as ordinary naturalistic predicates are.¹ But it can scarcely be the case that they are predicates of predicates, for few of us would care to ascribe intrinsic value to anything of the nature of a universal. I suggest that basic value terms are correctly predicable only of propositional expressions, that only certain facts about particulars are basically good or bad, right or wrong. Thus we wouldn't say of a consciousness that it is basically good, nor of pleasantness that it is basically good. We ascribe basic value to the fact that a certain state of consciousness is pleasant. It is the fact of the consciousness's being pleasant which is basically good. We can then say derivatively of the consciousness that it is good, good in virtue of the character of pleasantness which it has. This suggestion accords with W. D. Ross's interpretation of G. E. Moore's meaning. Ross, transposing the discussion to rightness, says, "Rightness is always a resultant attribute, an attribute that an act has because it has another attribute. . . . It is only by knowing or thinking my act to have a particular character . . . that I know or think it to be right."² This seems to be a way of saying that rightness also is a character only of facts. Thus it seems to be a reasonable hypothesis, and possibly a sound explication of Moore's intention, that while natural characters characterize particular objects basic value characters such as intrinsic goodness and rightness, characterize only facts, that is events or concrete states of affairs.

We now turn to the fundamental questions the theory of this paper raises about propositions. First, what is meant by the term? I am using the term "proposition" much as H. M. Sheffer uses "ascriptive". It signifies an intensional meaning which may be entertained, considered, believed, doubted, or disbelieved. As such it is distinguished from a concept or a universal which though an intensional meaning would not be an appropriate object of these attitudes. We may believe that a book is blue, but we don't believe blueness itself. Asserted propositions are commonly signified by declarative sentences. Unasserted propositions are better signified by participial phrases or dependent "that" clauses. To use one of C. I. Lewis's

¹ *The Philosophy of G. E. Moore*, p. 590.

² *Foundations of Ethics*, p. 168.

examples, "Mary making pies" or "that Mary is making pies" is a propositional expression which signifies a proposition, that is an abstract meaning or possible abstract state of affairs which we might well believe, doubt or disbelieve.

Are there such entities as propositions? A non-nominalist who is willing to accept concepts or universals should have little reason for rejecting propositions, first because of their close similarity to such general characters—as is pointed out in detail below—and secondly because the kind of being ascribed to them is the same modest kind as that ascribed to characters. If we say of them that they exist we mean only that, like mathematical entities which are said to exist, they have no mutually incompatible characters and that, circumstances being appropriate, they can be conceived or thought at different times and by different individuals. But if the term "exist" seems so strong as to be offensive to delicate palates, we can use instead the gentler term "subsist".

One way of trying to admit universals without admitting propositions involves denying that propositional expressions have any signification. This would limit their modes of meaning to denotation and connotation in Lewis's special sense of linguistic equivalents.¹ That connotation in this sense will not suffice to account for the meaning we believe propositional expressions have is shown by the analogous situation for characters. Lewis, for example, points out clearly that it would be possible for a student of a foreign language who knows the signification of no one of the terms of that language, nevertheless, through diligent study of a dictionary, to be able to give one or more linguistic equivalents for any term of it. We seem to understand the meaning of many propositional expressions in some sense other than that of being able to give verbal equivalents for them.

Nor can we get along with only the denotation of propositional expressions. Expressions with the same denotation may have different significations. For example, if the only coin in my pocket is a penny dated 1925, the expression "There being a coin in my pocket dated 1925" and "there being a penny in my pocket dated 1925" are both true and have the same denotation, though the signification of the first might well be believed and that of the second doubted. On the other hand, the signification of a propositional expression may remain unchanged whether or not it denotes anything and whether or not the facts about its denotation are known. Thus we all understand the

¹ Comprehension, I take it, cannot be defined satisfactorily without the use of signification.

signification of "President Truman now holding a press conference" whether or not he died a half hour ago and whatever the state of our knowledge about his existence. Of course if we knew he were dead we should know the proposition to be false. In that case we should know that it denoted nothing or had zero denotation, but even then its signification would remain the same. Frege calls the *Sinn* or signification of a propositional expression a "Gedanke" but he is careful to indicate that he means by this term not the subjective aspect of individual thoughts, but their objective content that is capable of being shared in common by many thinkers.¹ We can understand the *Sinn* of an expression, he notes, without knowing its truth value.

The need for supposing that there is some mode of meaning for propositional expressions other than denotation is particularly clear in the case of false statements. We seem to know what such statements mean and to recognize that different false statements have different meanings though they are alike in denoting nothing, in having zero denotation. We can avoid a semi-Platonic realism if we wish by holding that this meaning is a belief, a disbelief, or an entertained thought of some kind. But if we take this alternative we should at least avoid the error of supposing that what we are believing or entertaining is a concrete thought in all its particularity. Different people thinking, for example, of two and two being equivalent to four may have quite different imagery but may be believing only that abstract part of their different mental contents which is common to all of them. Susanne Langer has made the comparable distinction for characters, in differentiating between concrete conceptions and those common features of them which constitute shareable concepts.²

Another way in which some writers try to avoid admitting that there are certain entities which are signified by propositional expressions, whether true or false, is to turn attention to the meanings of the various constituents of the propositional expression. C. J. Ducasse, for example, asserts that a true proposition is a fact. Whether he would hold that this fact is denoted or is signified by the propositional expression isn't clear from his writings. He seems to hold that a false statement signifies or denotes nothing as a whole but its parts have referents in one of these senses.³ Thus I take it that he would say of the

¹ G. Frege, *Über Sinn und Bedeutung*, *Zeitschrift für philosophie und philosophische Kritik*, v. 100 (1892), p. 32, footnote.

² *Introduction to Symbolic Logic*, p. 66.

³ Propositions, Opinions, Sentences, and Facts, *The Journal of Philosophy*, v. 37 (1940), pp. 701-711.

propositional expression "John loving Mary" that whether it is true or false, the term "John" refers to John, the term "Mary" to Mary, and the term "loving" to the relation of loving. If this relation holds between John and Mary there is the fact of John loving Mary. Ducasse would appear to hold that this is what the expression "John loving Mary" means and that this fact makes that expression true. If the expression is false his view appears to be that though each constituent in the expression has a referent, the expression as a whole has none. But this view does not appear to fit the facts. What one believes if one believes that John loves Mary appears to be precisely the same whether as a matter of fact John loves Mary or not. And what one believes is not the referents of the three constituent terms of the propositional expression joined together into some kind of a merely conjunctive whole. One doesn't believe merely in John and Mary and loving. One believes that a relation of the kind loving holds between John and Mary. One believes the unitary meaning John-loving-Mary. Whether this meaning is, as Russell urged in his early book *The Problems of Philosophy* (Chap. 12), a complex whole the parts of which can be distinguished by analysis, or whether it is an uncomplex entity, containing neither parts nor constituents, is a further question. In any case what one believes is not a string or collection of particulars and a relation but a single meaning which remains one and the same whether the belief be true or false. It is this unitary meaning, which we may entertain, believe, disbelieve, or doubt, that is the proposition.

Let us suppose that the hypothesis that there are propositions, in the minimal sense of being described above, has been given some degree of confirmation by the evidence thus far adduced in its favour, and turn now to an elucidation of the close analogy between propositions and characters. The weight of this analogy will constitute, for anyone who admits characters, further evidence for propositions.

To be noted first, perhaps, is the point by point similarity between characters and propositional functions. The work of Russell and Whitehead, especially in *Principia Mathematica*, has indicated this in detail. Lewis's discussion in *An Analysis of Knowledge and Valuation* confirms it.¹ For example, the function signified by " \hat{x} being blue" has the same properties as the character blue. The class of all arguments for which the function becomes a true proposition is identical with the class of

¹ Pp. 58-65.

all exemplifications of the character blue. For every character implied by the character blue there is a corresponding function implied by the function signified by " \hat{x} being blue", and *vice versa*. $\phi\hat{x} \supset \psi\hat{x}$ is strictly equivalent to $\phi \supset \psi$. This analogy follows through in detail for every character and every propositional function of one variable. Further, as has often been pointed out,¹ a propositional function of more than one variable may always be treated as a function of one complex variable. For two variables may be regarded as an ordered couple, three as an ordered triad, and so on. Again, functions of functions are paralleled by characters of characters. And so throughout, the parallelism between characters and propositional functions seems complete. One wonders if the fact that we distinguish between them is not due entirely to the accidents of notational differences in our modes of expressing them.

It is worthy of remark that the abstract nature of propositional functions is not affected by the fact that the expressions for some of them contain one or more terms which purport to denote particulars. Thus " \hat{x} being taller than the Woolworth Building" expresses a function which is true for the argument denoted by "the Empire State Building" just as the character being taller than the Woolworth Building, actually does characterize the Empire State Building. This is a relational character and the fact that one of the terms signifying it denotes a particular does not prevent it from being an abstract entity which can, and in this case does, characterize several entities.

We turn now directly to the parallelism between characters and propositions. That it is extensive is indicated by the well-known fact that Boolean algebra applies not only to classes and class concepts but to propositions as well. Frege in his paper, *Über Sinn und Bedeutung* published in 1892, urged that propositional expressions, like ordinary terms, have both intensional and extensional meaning, corresponding to what we have called here signification and denotation. Lewis,² extends this analogy to other modes of meaning such as comprehension and connotation, in the special linguistic sense in which he uses that term. We consider first the parallelism on the intensional side. We have already made use of some of Frege's arguments to confirm the hypothesis that there are propositions. What remains to

¹ Recently, for example, by C. I. Lewis in *An Analysis of Knowledge and Valuation*, p. 60.

² *An Analysis of Knowledge and Valuation*, p. 57.

be shown is that they are like characters in being abstract, in being capable, if not self-inconsistent, of characterizing.

This is indicated by the fact that propositions are best expressed by participial phrases, these being modes of speech eminently capable of serving as predicates. But let us look beyond grammatical forms to the entities signified by propositional expressions. "Being a red rose" we could perhaps agree signifies an abstract character which may well characterize a number of concrete objects. Does not "A rose being red" similarly signify an abstract character which may characterize some concrete occurrence or state of affairs in my garden or in yours, or in someone's vase of flowers, or in some florist's refrigerator? Suppose that we add two terms denoting particulars to our expression so that we obtain say, "A rose being red in my dining room now". These limitations result in the abstract state of affairs which the expression signifies being less general but do not deprive it of all generality. For this abstract state of affairs could be realized by there being as a matter of fact in my dining room now, one or more of any of a large variety of roses with the colour of any one of a large variety of shades of red. As long as a propositional expression contains at least one constituent which signifies an abstract character the expression as a whole appears to signify an abstract character. It does not seem to matter if the expression contains other constituents which denote or purport to denote particulars. These limit but do not destroy the generality of the signified meaning.

Let us take another example. "Being taller than" signifies a relational character that is clearly abstract. There are many different degrees of being taller than, and for each degree many possible instances. In discussing propositional functions we concluded that "being taller than the Woolworth Building" symbolizes an abstract character in spite of the fact that the phrase contains one constituent that denotes a particular. Similarly the propositional expression, "The Empire State Building being taller than the Woolworth Building" signifies an abstract kind of situation. To be sure, in the concrete state of affairs denoted by this expression, the Empire State Building is taller than the Woolworth Building by a precise number of feet, but this detail, as well as many others, is not signified by the propositional expression. That expression signifies that the one building is taller than the other by some amount or other but does not specify the amount. All that it requires in order to be true is that the height of the building first named exceed the height of the building mentioned second. There are perhaps

an infinite number of ways in which this abstract requirement might be fulfilled.

If we turn to Lewis's example of Mary making pies, analogous remarks hold. Mary might be making lemon pies or apple pies or mince pies or assorted pies. She might be wearing a red apron, or a blue apron, or no apron at all. She might be making pies efficiently or inefficiently. The phrase "Mary making pies", though it has one constituent which denotes a particular, nevertheless as a whole signifies an abstract sort of occurrence which may be exemplified in many different possible concrete ways.

May such abstract occurrences or states of affairs properly be said to characterize anything? It seems so. Thus it would be somewhat fulsome but entirely accurate for Mary's husband to say on the way home, "I hope the actual situation in my kitchen, is now characterized by Mary making pies". The state of affairs regarding New York's buildings in its concrete actuality is characterized by the Empire State Building being taller than the Woolworth Building. There being a red rose in my garden does not characterize the actual state of affairs there now but may do so when summer arrives.

May we not conclude from these examples that self-consistent propositions like self-consistent characters are abstract entities capable of characterizing? The lowest level of each characterize particulars, characters being exemplified by concrete individuals, propositions by concrete facts.

Does the parallelism we have noted between ordinary terms and propositional expressions with regard to their signification, hold also for their denotation? What, indeed, do propositional expressions denote? On this point, I believe, earlier writers have been mistaken. Frege urges that they denote truth values, true propositional expressions denoting truth, false propositional expressions falsity. Lewis urges that true propositional expressions denote the whole actual world. Of false propositional expressions he prefers to say, not that they denote nothing but that they have zero denotation. Let us consider each view in turn. Frege urges that we never ask about the denotation of a propositional expression unless some question as to its truth value is involved.¹ This, I think is true, but it does not follow that what is denoted is a truth value. It is presumably the case that every unambiguous propositional expression is either true or false. This is a property every such propositional expression has, namely, its truth value. But to say that this is what is

¹ *Op. cit.*, p. 33.

denoted by a propositional expression blurs rather than highlights their similarity to ordinary terms. The property of ordinary terms which corresponds to the truth value property of propositional expressions is being exemplified or not being exemplified, being non-vacuous or being vacuous. But ordinary terms would not be said to denote vacuity or non-vacuity. They denote one or more instances of themselves or they have no instances. In the latter case we may say that they have zero denotation. Are there not in the case of propositional expressions entities corresponding to the instances of characters ?

There is little difficulty in the case of false propositions. As in the case of vacuous characters, they have no instances, no exemplifications, and we may say of them that they have zero denotation. But what do true propositional expressions denote ? The answer, I believe, is facts, and in the case of first order propositional expressions, concrete facts. These are parts or aspects of the actual world in all their determinate particularity. If "Mary making pies" be true, what that expression signifies characterizes an occurrence or a state of affairs in a certain home, a certain concrete region of space-time. If "Roses being red" be true, the signification of that phrase characterizes actual states of affairs in various gardens and various rooms at various times, characterize indeed every concrete occurrence of roses being red.

How should we delimit the facts which we say exemplify propositions ? As in the case of instances of ordinary characters, there seems to be a certain amount of choice. For example, of a book bound in red we may say that red characterizes the surface of the book, or we may say that it characterizes the book. We may say of a person, the evidence being the same in each case, that he has a friendly smile, a friendly face, or is a friendly person. Similarly we may say that Mary making pies characterizes only the state of affairs in the actual cubic volume in which she is working, or we may say it characterizes the state of affairs in the kitchen or the house. The New York Philharmonic playing a symphony may with equal correctness be said to characterize the state of affairs in the space-time region occupied by the members of the orchestra, or on the stage of Carnegie Hall, or in the whole auditorium of Carnegie Hall, or even in the world itself.

Lewis holds that what is denoted by any true concrete propositional expression is always and only the actual world as a whole. He is led to this view by the following considerations. "... when a term denotes a thing that thing must likewise

be denoted by one or other of every pair of mutually negative terms which could meaningfully be applied to it." And "Nothing short of the whole of reality could determine simultaneously, for every proposition the truth or falsity of it".¹ Presumably he means by "negative terms" completely contradictory terms. For merely contrary terms, or for complementary terms within a limited universe of discourse, the law of excluded middle does not apply. The number three does not have the character of being either red or blue. Nor does it have the character of being either red or not-red if by "not-red" is meant merely green or blue or some other non-red colour. But if the meaning of "not-red" includes not being coloured at all, then the number three is in that sense not-red. These considerations are, of course, as familiar to Lewis as to any of us. If they are applied to propositions and their instances, we can say, for example, of the expression "Mary making pies", that the limited concrete state of affairs denoted by this is characterized either by being hot or not-hot, depending on how much heat Mary and God have contributed to the actual state of affairs in her kitchen. As to whether this state of affairs is characterized by Nero-fiddling-while-Rome-burns or by its contradictory, it seems clear that there is no-fiddling-by-Nero-in-burning-Rome going on now in Mary's kitchen, and hence that the proposition Nero-fiddling-in-burning-Rome does not characterize that complex but limited actual state of affairs.

To say this, however, is not to clear away the difficulty Lewis raises, but to accentuate it. For if the state of affairs in Mary's kitchen is not characterized by Nero-fiddling-in-burning-Rome it is presumably characterized by the contradictory of that proposition. But then, if we say that a proposition is true if it has an instance, the proposition not-(Nero-fiddling-in-burning-Rome) is made true by this instance of it. Yet the original proposition, Nero-fiddling-in-burning-Rome was presumably made true by a fact which existed in Rome shortly before Nero's death. But of course contradictory propositions cannot both be true. Yet that just this is implied by the view that true propositional expressions denote limited actual states of affairs is the real point of Lewis's criticism.

Lewis himself avoids this difficulty by saying that a true propositional expression denotes the actual world, the whole of reality. This is true, but it does not seem to be the case that this is the only entity thus denoted. We may say correctly as was noted above, that Mary making pies characterizes the

¹ *Op. cit.*, p. 52.

state of affairs which is the whole universe. But apparently we may with equal correctness say that Mary making pies characterizes the more limited concrete state of affairs in her kitchen. Sometimes we desire to make just such a distinction. The proposition signified by "Rain falling now" may be true of the limited concrete reality in this area but not of that in another area.

We can hold that most true first order propositions denote limited actual states of affairs, and yet avoid the danger of contradiction which Lewis noted, by remarking and insisting that it is not the case that first-order propositions—other than universal ones—are true simply, true at all times, at all places, and under all circumstances. Rather they are *true of* limited states of affairs. As Lewis has himself remarked it is only of propositions knowable *a priori* that we can be sure that they are true "no matter what". Propositions about rain falling, about Communists infiltrating, about war breaking out, about Socrates being wise, are true only of certain limited actual states of affairs. There being Communist infiltration may characterize the actual state of affairs in one labour union but not in another. Socrates being wise was a feature of Athens in 400 B.C. but is not a feature of contemporary London. Just as a given concept may be exemplified by one entity and its complement or contradictory by another, so a given empirical proposition may be exemplified by a limited concrete fact at one locus, spatial or temporal or both, and its contradictory by a limited concrete fact at another locus. Thus Nero-fiddling-in-burning-Rome was exemplified in Rome at a past time, but does not characterize the state of affairs in Mary's kitchen to-day. It was *true of* the state of affairs there then but is not *true of* the state of affairs here now. Its contradictory, not-(Nero-fiddling-in-burning-Rome) did not characterize the state of affairs there then and was not true of it, but it does characterize the state of affairs here now and is true of it.¹ No contradiction is involved here.

There are two principal kinds of first-order propositions which are not generalizations. One type is illustrated by the unrestricted propositional meanings signified by "Rain falling" or "Communists infiltrating" or "War breaking out". Such propositions are true of any actual states of affairs, one or more, which exemplify the meanings signified. They are false and

¹ It should be noted that "Nero-not-fiddling-in-burning-Rome" does not express the contradictory of the proposition signified by "Nero-fiddling-in-burning-Rome". Nero-not-fiddling-in-burning-Rome is no more exemplified in Mary's kitchen now than is Nero-fiddling-in-burning-Rome.

their contradictories true of all actual states of affairs which they do not characterize. There is no such proposition *true* of a given fact which has a contradictory *true* of the same fact.

More common, perhaps, are more specific propositions such as those signified by "Rain falling here now" or "Bertrand Russell being wise" which are limited by a singular term or some term of localization. A propositional expression such as the first of these can signify a true proposition only if there be an exemplifying fact at the locus denoted by the space-time phrase. The fact of rain falling elsewhere does not exemplify the proposition signified by "Rain falling here now". Only the fact of rain falling here now, together with such more inclusive facts as contain this fact¹ can exemplify this proposition and make it and the expression signifying it true, *true*, to be more precise, *of* the exemplifying fact in this locus and *true* of all facts containing this fact.

Similarly propositional expressions containing singular terms, like "Bertrand Russell being wise" limit the facts which could make the proposition signified true. Russell himself must be a constituent of any fact which could exemplify this proposition. If the singular term denotes nothing or more than one thing the proposition signified by the expression cannot be true. A singular term thus limits the possible denotation of a proposition much as a locational term does. Indeed it seems to be the case that limitation by localization depends on limitation by singular terms. Spatial and temporal terms, to be capable of denoting uniquely, require a reference frame of particulars. This is provided by the entities denoted by singular terms. Thus, "the birth of Christ" denotes an event which gives concrete meaning to our temporal terms, while the equator, the Greenwich meridian and mean sea level provide a spatial reference frame. Ultimately, as Russell has suggested in his *Inquiry*, our reference frames may be formed of egocentric particulars, such as the entities denoted by "I", "now", "here", and so on.

In the case of denotatively unrestricted propositional meanings

¹ By one fact containing another I mean, for example, the state of affairs in Mary's house containing the state of affairs in her kitchen, or the state of affairs in Carnegie Hall containing the state of affairs on the platform. It is in virtue of such factual containments that we can say that Mary making pies, characterizes either the state of affairs in her kitchen or that in her house, and the Philharmonic playing a symphony characterizes either the fact occurring on the stage of Carnegie Hall, or the fact occurring in the building. For a further discussion of this notion of one fact containing another, see Arthur N. Prior: "Facts, Propositions and Entailment," *MIND*, N.S., v. 57 (1948), pp. 62-68.

such as that signified by "Rain falling", we have to make an empirical examination of any limited fact, such as the state of affairs in Boston now, to know whether or not this proposition is true of that segment of reality. But where singular terms are involved as in "Rain falling in Boston now", we can know without empirical investigation that the proposition signified by this expression is false of any state of affairs at any other time and place. For where a propositional expression contains a singular term, locational or otherwise, no fact which fails to include the entity, if any, denoted by the singular term can exemplify and thus make true the proposition signified. The proposition signified by "Socrates being wise", though it characterized the state of affairs in Athens in 400 B.C. and characterizes the whole universe which includes that state of affairs cannot characterize any fact limited to the here and now. But its contradictory, signified by "Not-(Socrates being wise)" characterizes your existence or mine, the state of affairs in Rome at the time of Nero or that in Boston to-day. Socrates-being wise is true of any fact containing the wise Socrates as a constituent but it is false and its contradictory true of every other fact.

In short, then, first order propositions—other than generalizations—are true if and only if they are exemplified. No fact can exemplify such a proposition unless it contains as a constituent the particular which any singular term required to express the proposition purportedly denotes.

This account is easily extended to empirical generalizations. For example, a generalization expressed with the aid of a particular quantifier is true if and only if it is exemplified by a fact which contains at least one entity denoted by the quantifier and its limiting description. This qualification, though explicative, is redundant, for no other fact could exemplify the generalization. For example, "Some cats are blue eyed" signifies a proposition which is true if and only if at least one cat is a constituent of a fact characterized by cat-being-blue-eyed. Similarly a generalization expressed with the aid of a universal quantifier is true if and only if it is exemplified by a fact which contains every entity denoted by the quantifier and its limiting description. Again the qualification is redundant. Thus "All cats are blue eyed" and the generalization this expression signifies is true if and only if every cat is part of a fact characterized by cat-being-blue-eyed. Material generalizations, like the other first order propositions we have been considering, are *true of* the facts which exemplify them.

We may conclude therefore, that all first order propositions are true of precisely those concrete facts which exemplify them. If there are no such facts they are false. Their contradictories are true of all other facts. Generalizations which are strict rather than material are at least second order propositions and are known not empirically but *a priori*. We turn now to the problem of extending our theory of truth so that it will apply also to abstract propositional expressions and the propositions they signify.

It should be noted that facts and propositions, like characters, are of different levels of abstraction. First order characters, such as red, combustible, and two inches taller than, if they have instances at all characterize particulars. Second order characters, such as the transitivity or symmetry of first order relations, characterize first order characters. Third order characters characterize second order characters, and so on.

In the case of facts, the lowest level consists of empirical facts such as we have been considering, concrete occurrences or states of affairs in the world of particulars. Then there are facts about the characters of concrete facts, facts about the characters of characters of concrete facts and so on.

Propositions are arranged in a hierarchy which includes all but the first stage of the preceding hierarchy, but is more extensive than it at each other level. True first order propositions since they are exemplified by concrete facts, are in a broad sense of the term, characters of such facts. False first order propositions are on the same level. Had they been exemplified, their instances would have been concrete facts. At the next higher level are propositions whose instances if any are characters at the level of first order propositions. The true ones among them are characters of characters of concrete facts. And so on.

Considerations such as these suggest the desirability of maintaining distinctions of type at every level between what is denoted, if anything, and what is signified by an expression, whether that expression be an ordinary term or a propositional expression. This is particularly important in the light of the warning issued by both Frege and Lewis that the same form of words may in one instance signify a given proposition and in another denote it. Frege refers to these different usages as respectively those of *gerade* and *ungerade Rede*.¹ Lewis calls an expression, for example "Mary making pies", which signifies a proposition, a predicable expression. Its function is analogous to that of

¹ *Op. cit.*, p. 36.

the adjective "sweet". The same or a similar expression which denotes what was signified by the predicable expression he calls "a pronomial expression". For example, in "Mary making pies" being true, the inner quoted expression functions pronomially and denotes the proposition ordinarily signified by the same phrase when it occurs alone. Such a pronomial expression is analogous to the abstract term "sweetness".¹

This distinction stands out most clearly in the case of ordinary terms. The concrete term "sweet" signifies a saccharine character exemplified by all sweet things denoted by the term. The cognate abstract term "sweetness" denotes not sweet objects but only the abstract character sweetness which "sweet" signifies. Analogously, "Mary making pies" in its pronomial use denotes the proposition which in its predicative use, it signifies.

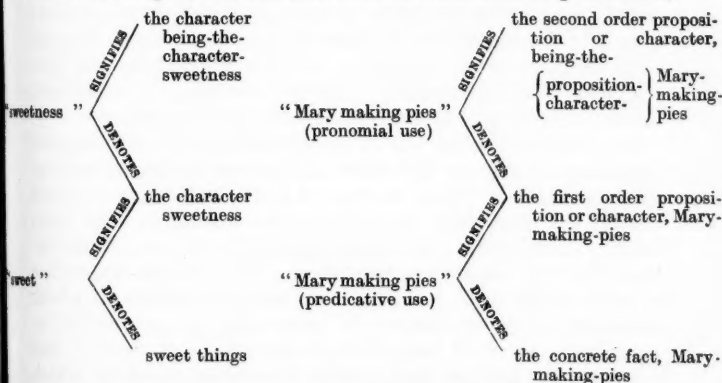
This difficult but important distinction appears not to be clarified by an additional assertion that Lewis makes. He says that an abstract term like "sweetness" not only denotes what the corresponding concrete term, like "sweet" signifies, but also that it signifies this same character that it denotes.² He doesn't say so explicitly, but presumably he would extend this doctrine to the pronomial use of expressions, which in their predicative use signify propositions. In their pronomial use, presumably he would say that they both denote and signify the propositions signified by the cognate predicative expressions. Since it follows at once from Lewis's account of denotation and signification that a term denotes those entities which have the character signified by that term, it would appear that if "sweetness" both denotes and signifies the character signified by "sweet", then this character sweetness has itself the character sweetness. But this seems no more true than to say that hotness has the character hotness or redness the character redness. Sweetness is of course identical with sweetness but it doesn't have, i.e. exemplify, that character. Similarly it would seem to follow from this doctrine of Lewis's that in its pronomial use the expression "Mary making pies" both denotes and signifies a first order proposition Mary-making-pies which is characterized by that same first order proposition Mary-making-pies, a statement which seems clearly false.

One can retain the correct statement of Lewis that an abstract term denotes what the corresponding concrete term signifies, and yet avoid these and similar difficulties by holding that the

¹ *Op. cit.*, pp. 52-53.

² *Op. cit.*, p. 42.

abstract term signifies not this character itself but rather a character one level more abstract, a character this character must have in order to be just the character it is.¹ Thus, for example, "sweetness" denotes the character sweetness, a character all sweet things have, the same character which is signified by "sweet", but "sweetness" signifies the higher level character, being-the-character-sweetness.² The character sweetness doesn't have, that is, exemplify, the character sweetness but it does have the character of being-the-character-sweetness. At the next level, the character being-the-character-sweetness is of course identical with the character being-the-character-sweetness but it does not *have*, does not exemplify, this character. The analogue of this treatment can be applied to propositional expressions. Such an expression as "Mary making pies" in its predicative use, signifies the character "Mary-making-pies" and denotes any concrete state of affairs thus characterized. The expression "Mary making pies" in its pronomial use, denotes, not such concrete states of affairs, but rather the character Mary-making-pies. It signifies the character essential to this character, namely the character of being-the-character-Mary-making-pies. A *prima facie* difficulty about this way of putting the matter is the unusualness of talking about the characters of the characters of particulars,



¹ This is a procedure which Alonzo Church has followed in a paper presented to the Association for Symbolic Logic and abstracted in the *Journal of Symbolic Logic*, v. 11 (1946), p. 31.

² I am indebted to Mr. Richard Cartwright for this way of describing the signification of abstract terms.

or of concrete facts. But in a field where this degree of abstraction is common, adequate terminology has been developed and there is little temptation to say that a term signifies what it denotes. Thus one would say that implication is transitive, and perhaps that transitivity is a property some dyadic relations possess, but one would be unlikely to say that transitivity has transitivity.

In the light of these distinctions we can now see how the theory of truth presented in this paper can be applied to abstract as well as to concrete propositional expressions. We said that a concrete propositional expression and the first order proposition it signifies is true of precisely those concrete facts which contain the particulars denoted by such singular terms or quantifiers as the expression contains and which exemplify the propositional meaning signified.

The theory as applied to abstract propositional expressions follows the same pattern. Consider, for example, the expression "Blueness implies colouredness". The first and last terms are singular, each denoting a unique character. The complex relation actually holding between these two characters is an instance of the meaning signified by "implies". These two characters in this relation constitute a fact of an order at least one level higher than the order of a concrete fact. This fact is an instance of the meaning signified by "blueness implies colouredness". We may generalize from this example and say that, excluding generalizations, an abstract propositional expression, and the proposition it signifies, is true of precisely those abstract facts which contain the characters denoted by such singular terms as the expression contains and which exemplify the propositional meaning signified. The first condition is redundant, because only such facts could exemplify the proposition.

Generalizations about all or some characters or propositional expressions of a given kind follow the pattern for generalizations about particulars. They are true of precisely those facts which contain the characters denoted by the quantifiers and their limiting descriptions and which exemplify the generalization. Again the first condition is redundant. This account will suffice for what might well be called empirical generalizations about characters or propositions. If something is necessarily or *a priori* true about all such abstract entities of a given kind, this is presumably because they possess a common character which implies some other character. This will be a fact of the next higher level and will be denoted by a singular abstract propositional expression of that level, an expression which will signify a proposition one level higher.

The exemplificational theory of truth of this paper may thus be expressed in the general form: A propositional expression and the proposition it signifies is true of precisely those facts which exemplify it. The only possible exemplifications are those which include as constituents the entities purportedly denoted by such singular terms or quantifiers as the propositional expression contains. This theory of truth is a special form of the correspondence theory. But it avoids the two great difficulties of that theory in its classical Lockian form. In the first place, under favourable conditions both the proposition and its verifying fact if there is one are open to observation and examination. For example we can be aware directly of both the denotation and the signification of the expression, "This sensory patch being blue". Further we can note that the former is an instance of the abstract meaning which is the latter. In the second place, this theory does not leave the precise nature of correspondence a mystery. It is specified as the relation of exemplification, whose converse is characterization. This is a relation whose logical properties have been studied extensively and are fairly well known. We know in some detail, for example the precise differences between a relation of something on one level, being an instance of, a case of, an exemplification of, something on another level, and one class of things being included in another class of things, both on the same level. Hence, none of the elements of this theory of truth are vague mysteries. In optimum circumstances, each of the three ingredients, fact, proposition and relation of exemplification is knowable, both by description and by acquaintance. I do not claim of course that this is the only possible theory of truth. I do present it as a consistent theory which advances a little farther along the path pioneered by Frege and Lewis.

V.—DISCUSSIONS.

DR. EWING ON "MENTAL ACTS".

THE notes that follow are in reply to what is, I think, the main thesis of Dr. Ewing's recent article¹; namely, as regards *cognitions*, that in some cases in which one would ordinarily say, "I know . . ." or "I see . . ." or "I begin to see that so-and-so is the case", one is aware by introspection that a mental act has taken place; and that in other, and presumably a much larger number of cases of these sorts, one has good ground for inferring the occurrence of mental acts. Dr. Ewing qualifies this claim in a number of ways: thus he agrees that most cognitive words as ordinarily used refer not to given acts of thinking but to dispositions to think, and further that the word "act", as applied to cognitions, may easily mislead. But these qualifications hardly affect his main thesis or the arguments he uses to defend it.

Ewing employs two main lines of argument. (a) He produces instances of cognitive words which, he claims (and I think rightly), have been neglected by 'anti-act' philosophers, and which, in his opinion, provide conclusive evidence of the existence of mental acts. (b) He tries to show that the 'anti-act' (or, as I shall prefer to call it, the dispositionist) thesis, *viz.* that cognitive words are fundamentally dispositional, cannot be plausibly or consistently maintained. With regard to (a), one cannot, I think, refute Ewing's argument directly. The most a dispositionist can do is to point out the misleading considerations, inadequate definitions and far from cogent arguments which, as it seems to him, have led Ewing and others to believe that mental acts, of a sort that can on occasion be introspected, *must* occur: and this line of attack will be profitable only if strong evidence in favour of the dispositionist case has already been produced. The need for a persuasive presentation of that case becomes clear when we turn to Ewing's argument (b). For here it is, I think, perfectly plain that Ewing has failed to understand the most important thing the dispositionists have to say. Responsibility for this, however, lies almost as much with the dispositionists themselves as with Ewing. For, on the one hand, dispositionists have often presented their case in very specialised, even exotic, guises: *e.g.* in Behaviourist analyses of Belief or in Verbalist and/or Imagist analyses of Thinking in general: and as against these specialised forms of the dispositionist case some of Ewing's arguments may well have force. On the other hand, certain dispositionists have gone to the opposite extreme and presented their views in wholesale fashion, bundling together all

¹ "Mental Acts" by A. C. Ewing, in *MIND*, N.S., Vol. LVII, No. 226, pp. 201-220.

'mental' verbs—conative as well as cognitive—as fundamentally dispositional. They may be right in their conclusion: but *prima facie* one would expect very different lines of argument to be required in the two cases. And this is why I confine myself in what follows to what Ewing has to say about cognitive words only.

Ewing admits (p. 202) that "to say that I know or believe or desire something is not just to say that I perform an act of knowing, etc. It is rather to say that I have a certain disposition." But in qualification of this he urges (p. 203) that "even if there were no single words which stood for mental acts, it would not oblige us to deny mental acts or to dismiss them as meaningless". And he later adds, "Logically, it would seem, the use of a dispositional word must presuppose awareness of certain occurrents or events. For a 'disposition' seems to signify simply the tendency for certain events to occur: it is nothing actual." This last is Ewing's main argument against the dispositionist case, and he backs it up with his criticisms of Behaviourist accounts of Belief and Verbalist and Imagist accounts of Thinking. More important, however, for his general attack on the dispositionist case are the following sentences (p. 203). "There are, however, some psychological terms which do seem to stand, at least sometimes, for mental acts. Thus the word 'see' in the non-physical sense of 'see' stands for a definite experience which would seem to be detectable introspectively when we say after a period of puzzlement, 'Ah, this is clear to me now'. Whether this experience is best described as an act is another question, but there does seem to be a definite experience which we can get hold of there" (my italics). These sentences require, I think, to be supplemented by Ewing's later admission (p. 208) that "the terms *knowledge* and *know* have both a psychological and a logical meaning at once. They connote not only that we are subjectively certain but that the certainty is justified. . . ."

These passages indicate, I think, that Ewing has failed to appreciate a most important thing that the dispositionists want to say about cognitive words: namely, that these words are *fundamentally* dispositional, and in this respect differ entirely from many other words that are commonly used in both dispositional and occurrent senses but in such a way that their dispositional senses presuppose their occurrent senses. This is the case when one says, e.g. "I am golfing again." This could be meant in a dispositional sense, viz. that one is now (say this year) periodically playing golf after a lapse of time during which one didn't play and that one will (presumably) now go on playing, periodically, for some time. And of course this wouldn't be true unless one had *actually* golfed on one or two recent occasions and unless there were some probability that one would go on golfing periodically. Now it is with this kind of dispositional word, or with words that can be dispositional in this well known way, that Ewing assimilates the fundamentally dispositional sense that some philosophers have attributed to cognitive

words. At least this is what the first three sentences quoted in the above paragraph suggest. On the other hand, the last two sentences quoted in the above paragraph show that Ewing is (as one would expect) aware of some of the things dispositionists have had in mind in urging their case—roughly, that our uses of cognitive words commit us, logically, in certain ways; but here again, as I shall try to show, Ewing fails entirely to see the most important point that the dispositionists are trying to get at.

Waiving for the moment Ewing's special and important points about such words as "see" in the non-physical sense, and confining the argument for the moment to the word "know", I would suggest that Ewing's position could be elaborated as follows. When anyone correctly says that he knows some fact, he is referring to four different things at once. First, he is now in a certain introspectible state of subjective certainty. Second, this state in fact attaches to an occurrent mental act—of knowing—of a sort that may, in favourable conditions, be introspected. Third, this act of knowing and/or this state of certainty are likely to give rise in him to a disposition or tendency to know the fact in question in future, and to know it in the same sense—subjective certainty attaching to act of knowing—in which he knows it now. Fourth, his claim to know commits him, logically, in various ways, because this claim means, *inter alia*, that what he asserts is completely justified. According to Ewing, it seems to me, the word "know" stands for all these things at once. According to the dispositionist it stands for the fourth, to be sure; but not for the first or the second, nor for anything like them; and not for the third, although it does stand for something which can easily be confused with it. The dispositionist will accuse Ewing and those who think like him of a special form of the *descriptive fallacy*—the fallacy of believing that all verbs are used to describe empirically distinguishable activities or states of affairs. To believe this with regard to the verb "to know", the dispositionist holds, is as erroneous as to believe it with regard to the verb "to exist". The word "know", he will claim, doesn't stand for a feeling of subjective certainty: this is a psychological appendage to certain of one's expression of one's knowledge (to oneself or to others). The word "know" doesn't stand for a mental act: the dispositionist's denial of such acts is not based on his inability to detect them, it results rather from the attention he persistently pays to type-distinctions between different words or different uses of one and the same word. The word "know" doesn't stand for a disposition to perform acts of knowing in the way Ewing seems to think it does—in the way that is, that the verb "to golf" can stand for a disposition to perform actual golf-strokes. All these denials on the part of the dispositionist add up to and bring us back to his claim that the word "know", and cognitive words in general, are fundamentally dispositional.

As against Ewing's presentation of it, the dispositionist case can

perhaps best be presented, or at least introduced, by asking in what important or more than grammatical ways the two following statements differ: (1) "I know that it is raining"; (2) "It really is raining". Not, the dispositionist will reply, in terms of their justification: the two statements are justified in the same way (presumably by perception). Not in respect of any logical consequences of asserting the occurrence of rain now (*i.e.* at the time of utterance). Not in respect of any different light they throw on the speaker's "state of mind": (the general context of either utterance, along with the speaker's tone of voice, facial expression, etc. would throw much more light on this). Where then, if at all, do they differ? In this: that the former emphasises, as the latter does not, that certain logical commitments, consequences of the assertion that it is raining, are *mine*—mine and not yours for instance, or mine beginning from now whereas they may become commitments for you later (when you have verified my statement) or in a quite different way (supposing you decide to give only provisional assent to my statement). "I know that it is raining" does, therefore, say something about me; but it says nothing about my state of mind, or about the occasion or process of my getting this knowledge. It doesn't *describe* anything, and because of this it doesn't *predict* anything. Not, anyhow, in the ordinary sense of predict: for, in ordinary usage, a prediction, *e.g.* the assertion of a causal law, involves two features that are palpably absent here. First, in asserting a causal law we indicate our belief that the law has instances; and second, the context of our assertion usually indicates how some of these instances could be specified, even if it doesn't actually specify them. But in asserting that I know something I make no prediction about my own future experiences. I may die to-morrow or the second after I see that it is raining: still I see it and know it and in saying that I know it I am saying something about my own commitments in respect of my assertion that it is raining. But these commitments are purely potential. They are to the effect that *if ever* I am challenged on my assertion, then I am committed to stand by it: that *if ever* I later disown it I must then confess that I earlier misused the word "know", and so on. Such a commitment involves no prediction about what I shall actually do, or even about what I am likely to do. Yet it is definite enough in its own way: it is only if we compare it—misleadingly—with an ordinary prediction that it seems indefinite.

As we have seen, to say "I am golfing again" (in the dispositional sense of "to golf") is, *inter alia*, to predict something on the basis of occurrences which a number of statements "I am golfing" (in the occurrent sense of "to golf") describe. But to say "I know now that so-and-so is the case" or "I now have such and such knowledge" is entirely different: here nothing is described or predicted, but something—a commitment—is as it were made manifest. And this, I think, is one thing—and I would suggest

that it is the main thing—that dispositionists have had in mind in urging that cognitive words are fundamentally dispositional. They are therefore not alarmed by the thought that the word "knowledge", being fundamentally dispositional, must stand, as Ewing puts it, for "nothing actual", or by the thought that it cannot be equated "with a definite experience we can get hold of". Instead, dispositionists point out that anyone believing that the word "knowledge" ever describes an actual occurrence will either fall into a crude type-confusion in his account of the dispositional sense in which, unquestionably, the word "knowledge" is often used; or else he must leave this dispositional sense entirely unexplained, entirely unrelated to the occurrent sense he claims for them.

Another of Ewing's arguments helps us to see how little he appreciates the real purpose of the dispositionist's case. As against the view (Hume's perhaps) that cognitions are only a peculiar kind of feelings, Ewing urges, rightly of course, that, unlike feelings proper, cognitions are "concerned with truth and falsity . . . and their essential nature lies not in what they feel like, but in a unique kind of relation to a proposition". Now, had Ewing recognised that for the purpose of his discussion here the important phrase is the last, *viz.* "unique kind of relation to a proposition", he might, I think, have begun to see what the dispositionists are getting at. But instead he proceeds: "There is an empirically given difference in nature of a kind which justifies the traditional division of mental processes into three sides, cognitive, conative and affective. . . ." And by an empirically given difference I think it is pretty clear that Ewing here means an introspectively discernible difference—between cognitions, conations and feelings; and this of course the dispositionist will deny. He will agree, to be sure, that what is peculiar to cognitions is "a unique relation to a proposition", but he will urge that it is the analysis which this phrase so obviously requires that has led him to his central thesis. And indeed it is notorious that this thesis has been developed, in the main, in answer to the questions, "How do sentences mean?" "How do signs signify?" "What are the defining features or properties of the sign-relation?" It would be ridiculous for me to attempt to summarise here all the lines of argument by which, starting from these questions, dispositionists have arrived at their conclusions; and it is unnecessary, since Ewing in his article excuses himself from the task of examining the sources of the conflict between dispositionists and "act-ists". But his statement that this conflict is "tied up with a whole mass of complications and misunderstandings" does scant justice to the fact that the dispositionist case has been suggested by—even if it has not yet been shown to follow from—some of the most original philosophical discoveries of the past eighty years: notably those that can be condensed in the cliché "A symbol has meaning only in use".

If the above criticisms are valid, then clearly Ewing's arguments

against the dispositionist case, revealing as they do an almost complete misunderstanding of it, lend no support to the view that mental acts exist. Ewing's case for mental acts therefore stands or falls with his positive arguments, to which I now turn.

He urges, rightly, that there is a marked difference, of a kind that is highly relevant to the present dispute, between the cognitive words, notably "know" and "believe", which dispositionists have chiefly discussed and, for instance, the verbs "to see" in the non-physical sense, "to recollect", "to entertain". In the passage I have already quoted Ewing refers to the definite experience we can get hold of when we say "Ah, this is clear to me now". And in much the same way, after trying to recall a face, one often says, "Ah, now I remember the man you mean". In such cases we seem to feel something happen: something, as it were, clicks to. At one moment we didn't see or didn't recollect: at the next moment we do. And therefore, Ewing suggests, we should perhaps equate the mental act, primarily, not with what is meant by "knowing" but with what is meant by "coming to know" (p. 203). This is one of the most interesting things Ewing has to say; but he fails to elaborate it, and, had he done so, he would have seen that it lends very little support to the case for mental acts.

To say that I "now see . . ." or that I "begin now to know what is meant . . ." is to say something about an event, a change, in my personal history—analyse this latter phrase in whatever way one will. But it isn't to say only this. Otherwise "I began to see what he meant" would be a sentence of the same type as "I began to laugh when he spoke". In general, I think that Ewing's mistake is to ascribe to the immediate occasion of a cognition properties that belong to the cognition itself; and although I personally believe that every cognition is logically related either to an earlier cognition (a cognition which has earlier begun to commit the thinker in question in various ways) or to an earlier exercise of an intelligent (controllable) habit of the thinker in question, I can see no more reason for holding that the immediate occasion of a cognition must be an act of thinking than for holding that the immediate occasion of, e.g. a wave motion must itself be wavy. One might have expected so appreciative a student of Kant as Dr. Ewing to be alive to this distinction and to its relevance to the case of words like "see" and "recollect". But in fact Ewing immediately equates the *partially* descriptive function or meaning of such words—for part of what they signify is an empirically discernible occurrence or change—with their total, including their strictly cognitive, meaning. To illustrate the point of this distinction. An image of a face comes up before me and I say, "Now I recollect the man you are talking about". And what this statement expresses clearly entails what the statement "Now I *know* what man you are talking about" expresses. But what the latter statement emphasises, in distinction from the former, is not something about my occurrent state,

whether momentary "cognitive act" or longer "cognitive process". When I claim to *know* I simply make emphatic that I am logically committed, *in potentia*, in certain determinate ways. The cognitive (fundamentally dispositional) function which is combined in the former statement with a descriptive function, is isolated and brought into full relief in the latter statement.

A closely similar argument can be brought, in defence of the dispositionist case, against those who urge that some at least of our uses of the word "think" are evidently occurrent, not dispositional; e.g. "I have been thinking about one of Ewing's arguments for the last ten minutes". Now if anyone claims that a sentence of this sort means that there has been, over the time interval mentioned, a continuous and introspectively discernible process which the word "thinking" describes, then I should disagree with him on empirical grounds (and many, though not all, psychologists who have tried to decide this and closely similar questions experimentally would support me). I am inclined to grant, however, that many of our uses of the word "think" imply that an empirically describable (but not therefore necessarily an introspectible) process, or complex of processes, is going on. What is important for the present discussion, however, is to recognise that the word "think", like the words "see" and "recollect", has at once some kind of descriptive and also a non-descriptive—strictly cognitive, fundamentally dispositional—meaning. Only, the word "think" differs from the words "see" and "recollect" in being patently ambiguous as between the different sorts of cognitions it connotes. Once, however, the strictly cognitive functions of the word "think"—those for instance that are articulated by the words "doubt", "question", "consider", "surmise", "suppose", etc.—are distinguished from its descriptive functions, the claim that in certain uses of it we refer *only* to occurrent states loses its plausibility. Or at least it can be supported only after a *general* refutation of the dispositionist case has been provided.

It seems clear, then, that the dispositionist has his answer even in the face of the most favourable instances the act-ist can bring forward in defence of mental acts. But so long as neither party really understand the underlying (and unconfessed) presuppositions of the other, we are faced with absolute deadlock. In this situation, it seems to me, the onus is on the dispositionist; for while Dr. Ewing and those who think like him are fairly happy in their mental acts and ask only to be left to enjoy them in peace, the dispositionist is trying to alter things, in particular he claims to be freeing the philosophy of mind from a radical error that has stunted it since the time of Descartes. It is therefore up to him, I think, to attempt a general explanation of why act-ists so easily misconstrue cognitive words as descriptive (and therefore as predictive also) and find it so difficult to understand what their opponents, the dispositionists, are trying to say. Now even if I possessed (which I don't) the

required explanation of act-ist errors—something quite different from the capacity to point out where act-ists have misunderstood their opponents or argued their own case badly—this would be no place to begin expounding it. The following very sketchy remarks may, however, be useful. Those who favour mental acts seem to think that unless there were certain instances of cognition which can be "got hold of" more or less *in toto*, it would be very difficult to account for the little we do know about our thinking, and that it would be virtually impossible for us to direct, control and correct our thinking. In urging this they seem to me rather like a simple-minded (but in his way genuinely empirical) person who, when faced with an elaborate piece of machinery, confesses that he cannot possibly understand it while it is in motion, but thinks that he might if he could first see and feel the separate bits of it in his hand one by one. But the fact is that mental life is not the kind of thing that one can stop—in order to see how one of the bits is working! By contrast, it may be noted, statements can be, in a sense, "stopped" and isolated—so that we can verify or correct them or reject them as misleading or meaningless. Nevertheless, I have real sympathy with the claim that the self-directing and self-correcting character of thought is something which the dispositionists must illuminate further if their views are to obtain general acceptance.

In conclusion, I cannot leave without comment Ewing's suggestion that if some philosophers (dispositionists) are unable to detect their own mental acts they cannot, if they are good empiricists, make their failure in this respect an argument against their opponents. To this I answer that a man's capacity to detect the facts of mental life may just as well be revealed negatively—in what he sees to have been misdescribed by others—as in claims to positive discovery; so that Ewing's argument can be made to cut both ways. And in this connexion I would urge that most of the philosophers who, since the time of Peirce, have failed to detect their own mental acts, have shown themselves in other ways to possess remarkable powers of self-analysis; although, to be sure, it is thanks less to such powers than to their persistent attention to type-distinctions that they have gradually disclosed the genius of cognitive words and thus opened up new prospects for the philosophy of mind.

W. B. GALLIE.

THE EXISTENCE OF MATERIAL OBJECTS

IN his article on the above subject in MIND of October 1946 Mr. A. H. Basson has considered the view that we can never know for certain that material objects exist. There he puts forward the following possible defence of the view :—

“ If by making the statement you do mean to say something about the future, then what happens in the future will constitute evidence for or against it. You cannot have now the evidence you will have in the future. If, therefore, by making this statement about the present, you mean to imply something about the future, the evidence you have must *necessarily* be insufficient ” (pp. 315-316).

In answer to this Mr. Basson says :—

“ We want to say that the evidence $[e_1]$ we have makes it *certain* that the table is here $[(x_1, y_1, z_1)]$ now $[t_1]$, and this makes it *highly probable* that we shall have other ‘ evidence ’ in the future. Now suppose the unexpected happens, and the table suddenly disappears. What is the bearing of this new evidence ? If the evidence $[e_2]$ we have is sufficient to make it *certain* that the table is not here $[(x_2, y_2, z_2)]$ now $[t_2]$, this makes it *highly improbable* that the table was there before, and this makes it *highly improbable* that the evidence we believed to be sufficient *was* sufficient. But we cannot argue from the improbability of the sufficiency to the probability of the insufficiency of our later evidence ; because this would make the present non-existence, and consequently the past non-existence of the table *less probable* ; and this would make the insufficiency of the former evidence *less probable*, and this would make the insufficiency of the later evidence *less probable* than we had assumed. Consequently, whatever degree of probability of insufficiency of the later evidence you choose to infer from the improbability of the sufficiency of the earlier, you can prove it is in fact less. Hence it is self-contradictory to infer from doubt of the past existence to doubt of its present non-existence. And it is equally self-contradictory to infer the other way.

“ I think it is clear from this, that, not only doubt of the material facts rest on certainty of some others, but also that doubt of the sufficiency of evidence likewise rests on certainty of the sufficiency of other evidence. Hence, we can know, really know, matters of fact, and that material objects, tables, chairs and the like do really exist ” (pp. 316-317).

I find it difficult to follow Mr. Basson. Nevertheless his argument appears to me fallacious. Let “ $T(x_1, y_1, z_1, t_1)$ ” be an abbreviation for “ The table is (tenseless) at (x_1, y_1, z_1, t_1) ” ; “ $p(T(x_1, y_1, z_1, t_1)/e_1) = 1$ ” be an abbreviation for “ e_1 makes it *certain* that T is at (x_1, y_1, z_1, t_1) ” ; and “ $p(\sim T(x_2, y_2, z_2, t_2)/e_2) = 1$ ” be an abbreviation for “ e_2 makes it *certain* that T is not at (x_2, y_2, z_2, t_2) ”. Mr. Basson seems to say, among others, the following two things : (a) we want to say

$$(1) p(T(x_1, y_1, z_1, t_1)/e_1) = 1;$$

(b) If

$$(2) p(\sim T(x_2, y_2, z_2, t_2)/e_2) = 1$$

is true, this makes

$$(3) T(x_1, y_1, z_1, t_1)$$

highly improbable, and this makes (1) highly improbable.

In other words, he seems to assert the following things:—

(4) we want to say (1);

(5) (2) \supset ((3) is highly improbable);

(6) ((3) is highly improbable) \supset ((1) is highly improbable);

Suppose we assert in addition

(7) ((1) is highly improbable) \supset ((1) is false).

From formal logic, we know that (1), (2), (5), (6), and (7) cannot be all true; because " $\sim((1) \cdot (2) \cdot (5) \cdot (6) \cdot (7))$ " is tautologous, the corresponding tautologous matrix being " $\sim(p \cdot q \cdot q \supset r \cdot r \supset s \cdot s \supset \sim p)$ ". Therefore, it is necessary that at least one of (1), (2), (5), (6), and (7) is false. (5) and (6) are asserted to be true by Mr. Basson. Is (7) true? It certainly does not follow from that " $T(x_1, y_1, z_1, t_1)$ " is highly improbable, that " $T(x_1, y_1, z_1)$ " is false, for even a highly improbable statement may be true—at least that is what is ordinarily claimed. On the other hand, does it or does it not follow from that (1) is highly probable that (1) is false? I think it does follow, if by "a statement is certain" we mean "we know the statement for certain". In other words, I think, if it is highly improbable that at t_1 we knew for certain that $T(x_1, y_1, z_1, t_1)$ on the basis of e_1 , then it is true that at t_1 we did not know for certain that $T(x_1, y_1, z_1, t_1)$ on the basis of e_1 . If this is the case, (7) is true. Granting this, we are driven to the conclusion that (1) and (2) contradict each other; i.e., either (1) or (2) is false, or both are false.

After having granted as much as Mr. Basson seems to have done, one would, I should expect, argue roughly as follows. Since we believed e_1 to be sufficient at t_1 and cease to believe so at t_2 on account of e_2 , we may cease to believe e_2 to be sufficient at some time later than t_2 . Hence, the conclusion which seems to suggest itself is that both (1) and (2) are false. One may yet dispute this conclusion by bringing in various subtle things which it is impossible to anticipate and enumerate. But it appears obvious to me that the conclusion leads to no contradiction. And what puzzles me is that Mr. Basson seems to argue that such a conclusion leads to contradiction.

True, he does not quite say so. Rather he seems to say that, if we infer from doubt of the past existence of the table to doubt of its present non-existence, then we would doubt less of the past existence, and consequently doubt less of the present non-existence. On the one hand, there is the present external situation described by the

statement "the table suddenly disappears" which makes me believe the present non-existence of the table and doubt its past existence; on the other hand, there is my memory that a moment ago I thought (1) is true. Since I thought (1) is true and doubt it now, I might think (2) is true and doubt it the next moment, and so (2) would be merely highly probable. But if (2) were merely highly probable, (1) would be more probable than if (2) is true, and so it would be less probable that I should doubt (2) the next moment. And so on. Hence, Mr. Basson seems to conclude, (2) is true, or at least (1) and (2) are not both false, because otherwise we would get a contradiction.

I believe there is some logical slip in Mr. Basson's argument. Since we are admitting a connexion between (1) and (2), we may grant that we have a fixed function $f(w)$:—

$$u = f(w) = p((p(T(x_1, y_1, z_1, t_1)/e_1) = 1) / (p(\sim T(x_2, y_2, z_2, t_2)/e_2) = w)) \quad (i)$$

Then, for any fixed evidence e_2 , w assumes a definite value, and, consequently, u assumes a definite value. w may or may not assume the value 1. In either case, there seems to be no contradiction.

Probably the following is Mr. Basson's point. Assume there is a function $g(u, w)$:—

$$v = g(u, w) = p((p(\sim T(x_2, y_2, z_2, t_2)/e_2) = w) / (f(w) = u)) \quad (ii)$$

Now the value of v depends on w by (i), and conversely, the value of w also depends on v by (ii). If we admit (ii), then, for any value w , unless the value of $g(u, w)$ happens to be 1, we should encounter a contradiction, because, by (ii), the value of w would be actually different. The conclusion Mr. Basson draws seems to be that we should therefore reject (ii).

I think the argument merely shows that we should in every case so choose the value w , that $g(u, w)$ assumes the value 1. Intuitively this looks like a problem of finding the limit of a convergent series. And, in most cases, the value of w need not be 1 in order that $g(u, w)$ assume the value 1. There seems to be no contradiction resulting from the adoption, along with our other beliefs, of both (i) and (ii) for certain suitable f and g . Hence, I conclude that Mr. Basson's argument is fallacious, or at least inadequate.

I am aware that my refutation of Mr. Basson's argument is not satisfactory. But I suspect that this is partly because Mr. Basson did not say very clearly what he meant to say. If he still believes in the validity of his argument, I am very eager to see a clearer formulation of it.

HAO WANG.

‘NECESSARY PROPOSITIONS AND ENTAILMENT-STATEMENTS.’

I HAVE two main criticisms of Mr. P. F. Strawson's article (MIND, April, 1948).¹ First, his use of quotation marks with variables continually produces expressions that have not, strictly speaking, any meaning at all. Secondly, his view as to the deduction of one necessary proposition from another is demonstrably wrong, even in very simple cases.

I

We must begin by considering the rules governing the use of quotation marks with variables. In the following expression :

(A) In ‘ x is a man’ ‘ x ’ is a free variable

‘ x ’ does *not* occur as a free variable ; for, just because ‘ x ’ does occur as a free variable in ‘ x is a man’, the expression (A) is a *true assertion* ; whereas if (A) contained a free variable, it would be a *function* and not an assertion at all. The very possibility of talking about the variable ‘ x ’ presupposes the rule : If a variable, not otherwise bound, occurs in a quotation, it is *ipso facto* bound by the sign of quotation. Without this rule, any expression that tried to assert something about the variable ‘ x ’ would contain ‘ x ’ as a free variable, and so would not be an assertion at all.

Let us now consider, in the light of this rule, how we ought to interpret an expression that Mr. Strawson uses twice on page 189. (What Mr. Strawson wants it to mean is another matter.)

(B) “ ‘ p ’ entails ‘ q ’ ” is a statement of higher order than “ p ” or than “ q ”.

By our rule (B) contains no free variables, and is thus not a function. It looks like an assertion ; but I doubt whether it is significant at all. “ ‘ p ’ entails ‘ q ’ ” could only be an assertion that the variable “ p ” entails the variable “ q ”, which is surely nonsense ; and (B) could only be an assertion that *this* absurd expression is ‘a statement of higher order’ than either the variable “ p ” or the variable “ q ”—which also should seem to be nonsense.

The context in which Mr. Strawson uses (B) is as follows :

(C) For all p and q “ ‘ p ’ entails ‘ q ’ ” is a statement of higher order than “ p ” or than “ q ”.

But (B), which is used in (C), should seem to be nonsense. And in any case the variables in (B) are not free variables, and (B) is not a function ; so it is no more legitimate to try to bind the variables in (B) by a quantifier than to write :

(D) For some x , ‘ x ’ in ‘ x is a man’ is a free variable.

¹ These criticisms apply also, I am afraid, in a considerable measure, to Mr. Hampshire's note on this article in the last number of MIND.

Thus (C) is in any case nonsense; and I must disappoint Mr. Strawson's hope that I shall 'agree' to (C); I cannot even 'take it seriously'.

We can, perhaps, make out what Mr. Strawson is trying to say. He wants (C) to be a generalisation of such sentences as:

- (E) " 'Your parents have another child' entails 'you are a sibling' " is a statement of a higher order than 'your parents have another child' or than 'you are a sibling'.

It will be clearest to show step by step how we first transform and then generalise (E).

(E') " 'Your parents have another child' " followed by " entails " followed by " 'you are a sibling' " is a statement of a higher order than 'your parents have another child' or than 'you are a sibling'.

(E'') The proper name of the sentence 'your parents have another child', followed by " entails ", followed by the proper name of the sentence 'you are a sibling', is a statement of higher order than 'your parents have another child' or than 'you are a sibling'.

(F) For all P, Q, the proper name of P followed by " entails " followed by the proper name of Q is a statement of higher order than P or than Q.

The variables in (F) are such that *names* of sentences can be substituted for them; this is shown by the structure of (F).

All this may sound pedantic; but Mr. Strawson cannot very well complain. He was aiming (cf. p. 185) at a *consistent* way of showing the difference between the 'mention' and the 'use' of expressions—or, as I should say, between an expression and its name; to this end he fairly peppers his text with inverted commas. His aim was rigour, precision; it is a just criticism to show that he has not attained it. Nor could he plead that at least I can make out what he is after; I cannot always do so. For instance, I should not like to try to unravel the following (on pp. 193-194):

(G) "a possible argument (or what is expressed by a possible argument) of the function " *p* " entails " *q* " " (sic.)

(G) as it stands is nonsense; for as we have seen, " *p* " entails " *q* " is not a function, and should seem not to be even significant. And I have no idea how I should correct (G); especially in view of the mysterious parenthesis. Incidentally, (G) may serve as an illustration that Mr. Strawson's use of quotation marks with variables is as unpleasant aesthetically as it is semantically indecent.

II

In discussing Mr. Strawson's view of deductive systems, I shall first introduce a simple means of avoiding his entangled quotation marks. I assume a convention by which: (i) when two sentences are joined with '⌋', the name of the compound sentence may be formed by joining the *names* of those two sentences with '⌋'; (ii) when one sentence is formed from another by prefixing '∼',

the name of the first may be formed from the *name* of the second by prefixing ' \sim '. Thus, "'your parents have another child' \supset 'you are a sibling'" is the name of the sentence 'your parents have another child \supset you are a sibling'; and "' \sim 'you are a sibling'" is the name of the sentence ' \sim (you are a sibling)'. I then use variables 'P', 'Q', for which the possible substitutions are *names* of sentences.

Mr. Strawson is plainly right in holding that, if some pair of sentences P, Q are necessary, then the deducibility of Q from P cannot lie in the fact that $P \supset Q$ is necessary. For $P \supset Q$ is *always* necessary, if P and Q are; but not every necessary proposition is deducible from every other. His positive theory, however, breaks down even for very primitive proofs.

If we assume as premises the forms of sentence $\sim P \subset \sim \sim \sim P$ and $(\sim Q \supset \sim P) \supset (P \supset Q)$, we reach as a conclusion the form of sentence $\sim \sim P \supset P$. Mr. Strawson would apparently give the following account of this inference:

For all P, $\sim P \supset \sim \sim \sim P$ is necessary.

For all P, Q, $(\sim Q \supset \sim P) \supset (P \supset Q)$ is necessary.

Ergo, for all P, $\sim \sim P \supset P$ is necessary.

And here he would have us understand both premises and conclusion as contingent statements about the use of expressions (*cf.* pp. 186-188). That is, 'is necessary' is to mean no more than 'is to be read as necessary by convention'. But in that case the inference is invalid. Along with the usual meanings of ' \sim ' and ' \supset ', I might have a convention that repeated negatives reinforce one another—that $\sim P$, $\sim \sim P$, and $\sim \sim \sim P$ are all logically equivalent. With this convention, the premises could be true and the conclusion false; for it is not the case, with the usual meanings of ' \sim ' and ' \supset ', that for all P, $\sim P \supset P$ is necessary.

Mr. Strawson is like a man who should try to solve a chess problem by consulting a history of the rules; instead of applying the rules themselves, which have no time reference. Or again, he reminds one of Schröder's Axiom of the Persistence of Signs; Schröder thought arithmetic required the 'axiom' that the signs we hold in memory or write down are not changed unbeknownst to us¹ (by a Cartesian demon, I presume). It is unfortunately obvious that, so far as most philosophers are concerned, Frege has written in vain.

P. T. GEACH.

¹ Cf. Frege, *Die Grundlagen der Arithmetik*, pp. viii-ix.

CONCERNING CARNAP'S DEFINITION OF 'EXTENSIONAL' AND 'INTENSIONAL'

IF one translates the "semantical" terminology Carnap has recently adopted, then the definitions of extensionality and intensionality in §§ 11, 12 of his last book, *Meaning and Necessity*, can, in the case of the simplest predicates, be stated as follows:

(E) An interpreted language system S is extensional if

$$f_x \equiv_x g_x \cdot \mathbf{C} \dots f \dots \equiv \dots g \dots \quad (1)$$

is true for all substitution instances of the predicate variables and for all expressions '...'

(I) A language system S is intensional (if it is not extensional and) if

$$\text{Th} ('f_x \equiv_x g_x') \mathbf{C} \text{Th} (' \dots f \dots \equiv \dots g \dots ') \quad (2)$$

is a syntactical theorem about S.

In (E) it is essential that S be interpreted, since otherwise it would make no sense to speak of the truth or falsehood of a substitution instance of (1). In (I), instead of using the syntactical term 'theorem (Th)', Carnap speaks of L-truth. Instead of saying "Th (' $f_x \equiv_x g_x$ ')", he says " $f_x \equiv_x g_x$ ' is an L-equivalence"; and he also says that two predicates fulfilling (2) are L-interchangeable. However, his notion of L-truth is in one respect broader than the purely syntactical notion of a theorem. If, e.g., the rules by which S is interpreted co-ordinate to two constant predicate symbols the same predicate, the formula obtained by substitution of these two symbols into (1) would still be considered an L-truth.

From (E) and (I) Carnap claims—as I shall show, erroneously—that a certain theorem follows. I refer to Theorem 12-3b (p. 52) which states that in an extensional language system L-equivalent expressions are L-interchangeable. However, (E) implies only that

(A) if a substitution instance of the expression to the left of the horseshoe in (1) is true, then the corresponding substitution instance of the expression to the right of the horseshoe is true.

From this it does not follow that

(B) if the first quoted expression in (2) is a theorem, then the second quoted expression in (2) is a theorem.

While (B) does thus not follow from (A), it would (for a large class of language systems) be implied by the following proposition:

(C) $\text{Th} ('f_x \equiv g_x \cdot \supset \dots f \dots \equiv \dots g \dots ')$.

It is instructive to examine a fallacious argument (which was, perhaps, in Carnap's mind) by which (C) seems to follow from (A): "Since S is an extensional system, (1) holds for all substitution instances of the predicate variables. But a statement form all of whose substitution instances are, in fact, true is L-true." The

source of the fallacy is the shift in the meaning of 'L-true' that has here taken place. To see this clearly, it is sufficient to consider any case that fulfils the following three conditions: 1. The language L into which S is interpreted is not extensional (so that *in it* the formula corresponding to (1) is not a theorem). 2. L contains an extensional part, L'. 3. The interpretation of S lies entirely within L'.

GUSTAV BERGMANN.

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VI.—CRITICAL NOTICES.

States and Morals. By T. D. WELDON. John Murray, London, 1946. Pp. xi + 302. Price 9s.

"I WILL go so far as to maintain," writes Mr. Weldon, "that some knowledge of the history and political organisation of a few States is essential to any understanding of political theory" (p. 154). One cannot read this sentence without a feeling of discomfort. The opening words prepare us for a challenging utterance; and then it comes—surely a triviality, perhaps a tautology. Can this anti-climax be deliberately designed? Is Mr. Weldon's intent a rather heavy sort of irony, at the expense of theorists who "dictate to Nature"? Apparently not: he seems to be in deadly earnest.

This earnestness is not entirely preposterous. Such is the sad state of political theory (as taught by philosophers) that Mr. Weldon shows more than ordinary daring in recommending empirical enquiry to the political theorist and almost unprecedented enterprise in engaging in it himself, however modestly and apologetically. Still, that he should insist so vehemently on what should be, to an empiricist, a tautology suggests that he has not shaken himself quite free from the rationalistic arbitrariness of his predecessors—as is indeed made quite clear in his first chapter, "The Aims and Methods of Political Philosophy." His own preference, he there tells us, is for empiricism, since rationalism ("deduction from definitions") has no way of answering the questions which most vitally concern us. But he is not prepared to assert, as a thorough-going empiricist would, that rationalistic deductions are fraudulent. Indeed, he writes as follows: "I can deduce [from definitions], important consequences about the status of the individual without considering the actual organisation of existing States at all" (p. 20).

Of such deductions, he gives a number of examples, of which I propose to examine only one, not the least plausible. From the definition, "The State is a machine", we are to deduce the following: "The individual is real while the State is just a combination of related individuals. It exists, presumably, in order to get something done, and, in Prof. Laird's phrase, may be called 'The Device of Government'" (p. 21). Now, no doubt we can deduce certain consequences from the hypothesis that "X is a machine", but this is only because we know something about the behaviour of machines; our conclusions, that is, do not follow from the definition alone but from the definition taken together with, say, the laws of thermodynamics. There is no such law which would enable us to deduce from "A wireless set is a machine" any conclusions whatsoever about the relative reality of valves and filaments, or filaments and circuits. How, then, does it follow from "The State

is a machine" that the State is "just a combination of related individuals", let alone that the State is a machine which its constituent parts use as a device? This "deduction" is nothing but the crudest sort of argument from analogy, depending even then upon unstated ancillary hypotheses, some metaphysical (*e.g.* that if the parts of a thing are individually replaceable, the thing is "just a combination"), some empirical (*e.g.* that individuals can move from one State to another without substantial change of character). It is not surprising to find that from this very machine-definition it is sometimes "deduced" that individuals are "but cogs in the machine" (precisely the opposite of Mr. Weldon's conclusion). Anything at all can be made to "follow", if we are sufficiently arbitrary.

It is important to notice that if a rationalistic theory is to convey any meaning to us, it must at some point draw upon empirical resources (usually by falling back upon "what everyone knows" *i.e.* ignorance and prejudice). On this point, Mr. Weldon shows some uneasiness. He cannot help noticing that his own account of particular rationalistic deductions is studded with empirical references. These, he assures us, are introduced only because "abstract argument is hard to follow"; their function is pedagogic (p. 28). I should like to suggest, on the contrary, that, without an occasional appeal to the empirical, rationalistic theories could not even be expounded, let alone defended; even the description of an Ideal State, if it is not to be empty and unintelligible, must contain empirical points of reference.¹

His failure to see quite what is wrong with rationalism is bound to weaken Mr. Weldon's empiricism, which he thinks of merely as "an alternative method" (p. 17) to rationalism, whereas surely it is (amongst other things) a *critique* of rationalism. Altogether, Mr. Weldon's empiricism turns out to be of a somewhat strange and peculiar kind. He starts hopefully enough: "I shall try to show that political theories closely resemble working hypotheses invented to explain observed facts" (p. x). But the observed facts are not, as we might expect, political operations; they are "convictions and sentiments about the value and purpose of individual human beings" (*ibid.*). In what sense of "explain" does political theory "explain" these sentiments? In a quite extraordinary sense: "The great political theories grow out of and give expression to the moral beliefs and sentiments" (p. 280) *i.e.* to explain is "to give expression to"—surely the typical case of pseudo-explanation!

Indeed, on this showing, political theories are all of them ideologies, policies masquerading as theories. (This explains why, as Mr. Weldon says, political "working hypotheses" are "logically

¹ My argument so far has been a free variation on certain themes in Prof. John Anderson's "Empiricism" (*Aust. Jnl. of Psych. and Phil.*, xxi, 53).

irrefutable"). Perhaps this is the true character of the traditional theories; should we not then look elsewhere, to a positive theory of political institutions, for a genuinely empirical political theory? But Mr. Weldon assures us that there is nowhere else to look, because, and here he really startles us, "political institutions are no more than symptoms of the political theory on which a given State is based, and political theories inevitably take for granted moral views about the importance of the individual" (p. 224). This is, in some ways, the central assumption of Mr. Weldon's book. Yet it would imply, amongst other things, that political theories preceded political institutions, which no one but the most naïve of contract theorists has ever been prepared to maintain. Certainly, some of our modern political institutions have been deliberately designed, but even these are "more than symptoms" of political theories. We shall never understand, for example, why the Australian constitution gives this power to the Federal Government and refuses that power unless we take account of the inter-State rivalries and economic pressures of the pre-Federation period. No doubt the Constitution has been influenced by the "separation of powers" theory, but that theory itself was developed as a result of reflection upon conditions in Great Britain, where the separation had come about of its own accord, not because anyone particularly wanted it, but because no one was strong enough to prevent it. (When we talk of "the separation of powers" as a *theory*, we are taking it to affirm that certain consequences follow from the separation of powers; of course this separation can also be a *policy*, but the theory and the policy are quite distinct.)

Mr. Weldon does not want to say that political theories are ideologies; he wants to treat them as science, although of a queer sort. But we shall be quite bewildered, in reading Mr. Weldon's book, unless we remember that for him a political theory is a method of justification. Thus, when he writes that "Since no one theory will cover *all* States, *the* theory of *the* State is a delusion" (p. 202) and then goes on to say quite a number of things about all States—for example, that "no State can permit the survival of professional codes which conflict with national standards" (p. 283)—we are at first inclined to accuse him of inconsistency. But that no theory covers all States does not mean, to Mr. Weldon, that no true propositions are discoverable of the form "All States are . . ."; it simply means that no method of justifying obedience to the State is universally acceptable. His talk of "working hypotheses" obscures the structure of Mr. Weldon's argument; he is not discussing empirical theories, his concern is with systems of defence.

Perhaps that is why he is satisfied, to so notable an extent, with the sort of political philosophy conventionally taught at Oxford. Whatever the reason, when he comes to describe, in his second chapter, the possible types of political theory, one is astonished to

find not a word about pluralism, and not a word about "the Machiavellians", for all their special relevance to Mr. Weldon's theme. The organic theory, the force theory, the consent theory are very lucidly described—this is an admirable chapter for students to read—but the pluralist will feel that Mr. Weldon has set before his readers a long series of false antitheses.

There are the same limitations (and the same virtues) in Mr. Weldon's third chapter, in which he outlines the political philosophies of Aristotle, Hobbes, Locke, Rousseau and, as a concession to other fashions, Karl Marx. Nothing could illustrate more clearly the constricting effects of traditional political philosophy than his misunderstanding and maltreatment of Marx, which I shall briefly summarise.

1. Marx was a psychologist : "it was assumed by Marx that the only operative factor in human nature is a desire to promote the material well-being of the agent" (p. 115). This is precisely the "Philistine" interpretation of economic materialism against which Engels so vigorously protested. ("By the word materialism the Philistine understands . . . cupidity, avarice, miserliness, profit-hunting and stock-exchange swindling—in short, all the filthy vices in which he himself engages in private", *On Feuerbach*, § 2).

2. The Marxist theory is deduced from psychological assumptions : "exploitation is a necessary consequence of a psychological assumption" (p. 164). It will certainly involve a complete rewriting of the history of economics if Mr. Weldon is correct : it has not so far occurred to anyone that the theory of surplus value is a piece of psychology.

3. Marxists think that capitalism will break down because individual capitalists are incompetent (p. 120). But when Marx writes that "what the bourgeoisie produces, above all, are its own grave-diggers", he does not mean that individual capitalists are stupid, but that, for example, capitalism cannot help generating destructive wars, *because it is the kind of economic system that it is*.

4. Marx thinks that it is changes in our moral consciousness which produce revolutions. Mr. Weldon quotes : "When the moral consciousness of the masses declare this, that or the other economic phenomenon to be wrong . . . *this means that* the phenomenon in question has already outlived its time" and comments "This is not very good materialism, but it is sound sense. People are much more likely to abolish or abandon capitalism because they think they ought to do so than they are to be constrained by its internal contradictions" (p. 121). Mr. Weldon has quite reversed Marx's argument : which is not that institutions will be swept away once the moral consciousness has revolted against them, but that this revolt only takes place when the institution *has already* "outlived its time" i.e. when it is no longer assisting the development of production.

5. "When the Marxist uses the word 'State', he consciously

and deliberately uses it with a different meaning from that of the ordinary man or of authors who do not hold the Marxist political theory" (p. 23). This is a very convenient doctrine: *Objection*, "The State is a committee of the bourgeoisie"; *Reply*, "In your sense of the word 'State', no doubt, but not in our sense". But it won't do. Marx and Lenin are talking about the State whose workings are described in *The Times*; what they say about it may be false, but that is another story.

In short, Marx has to be assimilated to the traditional patterns: Mr. Weldon cannot even conceive the possibility of a political philosophy which takes its departure not from the individual man, but from social forces. Naturally, his account of the more orthodox political philosophers is much better than this, although probably no one will be quite satisfied with it at all points. My own particular quarrel is with Mr. Weldon's interpretation of Hobbes. Mr. Weldon thinks that the desire for power, in Hobbes's theory, is derivative from fear. "Most men have wanted dominion in order to get something. Hobbes wanted it in order to avoid something" (p. 103). But this makes nonsense, so it seems to me, of Hobbes's theory. If fear were the only motive, men would surrender without a struggle; fear makes the State possible, but "the perpetual and restless desire for power" makes it necessary.

In the fourth chapter, Mr. Weldon the empiricist is at work; although it needs to be remembered that it is systems of defence he is studying, not political institutions. He has described what he believes to be the main types of political theory (methods of justification); he has now to consider, through a study of Great Britain, the United States, Russia and Germany, how far existing States exemplify these theories (make use of these methods of justification). He disclaims any special competence as a political observer, but what he has to say is in fact interesting, lively and acute. Naturally enough, however, it suffers from the deficiencies of Mr. Weldon's political theory. He is far too ready to talk about what "the Swiss" think, or what "the Americans" think, or what "we" think, this being in accordance with his ascription of a uniform political theory to all the non-reluctant members of a State. Does Mr. Weldon mean that "*nobody* felt really happy about the employment of 18B" (p. 209, my italics)? Or that "the English as a whole are uncomfortable at arrangements which they feel to be unfair to other people" (p. 203)? Is it, I wonder, the notorious English reserve which prevents this amiable characteristic from being immediately obvious to the foreigner, or could it be that the English are very good at not feeling arrangements to be unfair? Generalisations of this sort can surely be left to the journalist.

Mr. Weldon is now ready to draw his main conclusions. The first is that the organic theory is true of some States, the machine theory of others. What this means to Mr. Weldon, of course, is that in some States the actions of the rulers are usually justified

by an appeal to the organic conception of the State, whereas in other States the justification usually takes a more utilitarian form. This it would be difficult to deny although if we were to take up the rather different question—how States actually work—we might decide that no State ever “expresses Society” and that none is ever “a machine”, even if every ordinary citizen thinks he knows better.

The second conclusion is that no method of justification can be proved to be ultimately more reasonable than any other. He rejects entirely the view ordinarily held by moral philosophers that “general agreement will be found, at least between civilised and educated people, as to what ought to be done in a particular case” (p. 225). Moralists have been able to make this view plausible, he considers, only by concentrating upon trivial “second-order” moral issues (my duty to post a letter, etc.). These trivialities are usually defended as “only examples” but, Mr. Weldon argues, they are very misleading examples, because they are not at all typical in their tractability; first-order moral issues, those on which we are prepared to make important sacrifices, are quite different in kind from the ordinary “duties” of everyday life. And it is one virtue of the study of politics that it draws our attention to the really crucial moral issues, “the most intractable moral problems” (p. 234). This is, I believe, a point of great importance: the sort of moral issue which arises, say, in a General Strike is usually ignored by respectable moralists, perhaps just because it brings out so clearly the diversity of moral outlooks which can exist side by side within a single community.

Does this diversity imply that first-order moral issues are undiscussable? Mr. Weldon’s argument runs like this: when we say that something ought to be done we are making that decision from within a certain network of personal relationships. “My moral obligations arise from the values I set upon the well-being of myself and other individuals” (p. 274). (Characteristically, “individuals” includes institutions and causes.) We can discuss moral issues only with those whose value-network is not radically different from our own. Thus the main political parties in Great Britain can fruitfully discuss with one another, because (for all their pretences to the contrary) they value much the same kind of thing (p. 2), but there can be no fruitful discussion on fundamental issues between organic and democratic States, and similarly (because there is no neutral system in which the question could be sensibly discussed) it would be ridiculous to ask which system is “really” the better (chapter 5).

Once more, Mr. Weldon is raising an issue of the first importance. We could put it this way: under what conditions are political negotiations possible? Mr. Weldon does not, of course, deny that on some issues it is possible to negotiate; indeed, he specifically makes the point that “If every economic disagreement is to be worked

up into an ideological controversy, the prospects of peace are negligible" (p. 303), but at the same time he rejects the view that it is possible, in principle, to settle *every* issue by discussion, or that if two people continue to disagree this must mean that at least one of them is ignorant or stupid. Perhaps he makes too sharp a distinction between conversion and discussion; on the face of it, men are often converted from one system to another *through* discussion, even if the conversion does not consist, simply, in seeing something to be true which they previously held to be false. But as against the view that totalitarianism, for example, is a mere error in judgment, which a little careful "education" can overcome or greater practice in the use of democratic mechanisms will subdue, Mr. Weldon rightly emphasises that totalitarianism is a moral outlook and that men differ vitally (not accidentally, through ignorance or habit) in the kind of moral outlook they find acceptable. He emphasises, also, that those who try to impose democracy by force will produce nothing but a mechanical imitation, and may well lose the substance of their own democracy in the process. In all of this, there is a refreshing absence of optimism and moralism.

Much else in Mr. Weldon's book is eminently worth discussing, especially, perhaps, his distinction between "radical" (*i.e.* levelling) democracy which, through its determination to ensure that men shall be equal, develops "a good deal of superficial likeness to the full-blooded organic State" (p. 248), and individualist democracy which denies that there is anything unreal or wicked about diversity—in ability, in power or in opinion. We should have liked a closer analysis of the distinction between "power" and "force" which is, at this point, vital to Mr. Weldon's argument—it is not sufficiently illuminating to be told that "power used irresponsibly is no longer power"—but, with all its incompleteness, what he has to say is well worth the close attention of all political theorists.

J. A. PASSMORE.

Freedom and Civilisation. By BRONISLAW MALINOWSKI. London: George Allen & Unwin Ltd., 1947. Pp. xiv + 338. 16s.

PROFESSOR MALINOWSKI was writing this book in 1941 and the early months of 1942. It was unfinished when he died in May 1942, though all the material was complete in draft form. It has been arranged and seen through the press by his widow.

When the European war broke out in 1939, Malinowski was in the United States, and he worked as Professor in Yale University. There, we are told, he was "profoundly disturbed by the lack of realisation among students of the significance of the war and the consequences of a totalitarian victory"; and this book is the outcome of his efforts to clarify the issues involved. He held that

freedom is essential to the maintenance and advance of civilisation' and his primary task was to make clear just what the concept of freedom involves, and how it is involved in cultural development. This was to be "an anthropological contribution to freedom"; and what he was seeking can be gathered from his praise of certain writers who were "able . . . to use the concept of freedom in a manner which the anthropologist would fully endorse, in that the concept could . . . be used for any type of culture and any type of evolution" (vii).

Here as in his other posthumous book, *A Scientific Theory of Culture*, Malinowski was seeking generalisations which could be applied to any culture; an aim which he held essential to anthropology, however important he took to be the study of particular cultures as integral wholes.

Two main points stand out in his general treatment of freedom. The first depends on his insistence that a scientific concept must refer to characteristics and conditions which can be studied objectively. This leads him to reject any concept of freedom which arises out of subjective feelings, such as that of being free from restraints, or being able to do what one likes, or being willing to accept the demands made on one by one's environment. He seeks a concept embodied in actual facts of outward behaviour. He rejects the idea that one is free only so long as one is not engaged, so long as one has not committed oneself to the performance of some task. For him the conditions of freedom are to be found in the "conditions under which human action can run smoothly and effectively, that is, freely" (77).

Here arises the second main point. Effective action is always culturally determined. It involves co-operation with other individuals, the use of material resources, and the enjoyment of the results; and none of these is possible except within a cultural system. "The individual's freedom consists in his ability to choose the goal, to find the road, and to reap the rewards of his efforts and endeavours. . . . The determining conditions of freedom are therefore to be found in the manner in which a society is organised; in the way in which the instrumentalities are made accessible; and in the guarantees which safeguard all the rewards of planned and purposeful action and ensure their equitable distribution" (25-26). Freedom concerns the three phases of purpose, execution and results (91). The entire discussion is organised round these three phases.

The main stress in the discussion is on freedom "as a quality of the cultural process as a whole", not on freedom as a quality possessed by individuals. Malinowski develops in great detail the point that effective action involves obedience to various types of law, such as those of the physical materials used as instruments, those of the biological necessities of the organism, and those resulting from the need for discipline and authority in the organisation of groups of individuals associated together for a common purpose. As the range of action widens, the need for cultural restraints increases,

and the discipline imposed on the members of the group becomes tightened. To be free, *i.e.* to be effective in action, the individual must put on chains.

None of this is new. It is thoroughly Hegelian, and quite compatible with Totalitarianism. One can see how Malinowski met halfway such young enthusiasts in Yale as saw in an iron discipline the sure way to national efficiency.

But here comes the twist. Rules and constraints are needed to establish freedom, but they can destroy it, and it becomes necessary to show at what point the transition occurs. The difference between rules making for freedom and rules destroying freedom turns on the extent to which the individuals involved in the three-fold process of purpose, action and benefits, participate in all stages in the process.

This involves a detailed examination of social process, as the complex set of activities through which the needs, basic and derived, of the individuals in the community are met. In his *Scientific Theory of Culture* Malinowski defends the view that the study of society must be based on the examination of elements which are capable of functioning in their societies as genuine wholes, and whose working in different societies can genuinely be compared. "It is necessary to show, first and foremost, that a phenomenon which we want to compare in various cultures . . . is a legitimate isolate of both observation and theoretical discourse." Such a legitimate isolate he found in an "institution", an organised group of individuals whose co-operative purpose is to realise some end desired by the members. He considered it not only possible, but for scientific purposes necessary, to draw up a list of types of institution existing in every culture, however much they might vary in their details in different cultures.

Every society has to make provision for food and shelter, for the birth and education of children, and for the exchange of services, and a variety of institutions (family, local groups, occupational groups, age and sex groups, etc.) arises for these purposes. With the development of wealth and military power, differences of rank become important, and these become embodied in institutional form. Every institution involves some method by which decisions can be made and enforced and disputes settled. And as a community develops, institutions "which are primarily integrated on the use of effective force" become important, especially in connexion with defence and aggression. Malinowski works this out by relation to basic biological needs on the one hand and derived cultural needs on the other.

All this is presupposed in *Freedom and Civilisation*, where it is sketched out briefly, and looked at always with the object of noting just where the principle of authority is essential for the smooth working of institutions, and where it becomes an instrument of oppression. He analyses the structure of an institution into the three phases of "purpose, implemented action, and results" to which

we have already referred ; and he takes oppression to be any interference whose purpose is to deprive some of the members of the institution of their full participation in all the phases of the activities.

Where a primitive society remains simple, there is little scope for authority to become oppressive. An individual participates in a variety of groups, each relatively autonomous, and his education in the traditions of a group as regards its purpose, the ways of handling its material implements, and the rules of behaviour toward one another which must be obeyed by the members, is effected within the group. There is a high degree of mutual dependence between the members of the group, who in addition are kinsmen. The material implements remain simple, so that each person can own sufficient of them to prevent any particular individuals from controlling the rest through controlling the implements of production.

From this point of view Malinowski describes primitive societies as "proto-democracies". Their freedom lies in the "multiplicity of differential influences" brought to bear on any individual. This freedom arises from the multiplicity of institutions, their autonomy, and the lack of means by which a few persons can coerce the rest.

This provides the clue to the conditions of freedom in all societies. "Democracy as a cultural system is the constitution of a community which is composed of collaborating groups", each group being "an institution, which is itself built on democratic principles, in which initiatives, purposes and constraints are well distributed" (228). Malinowski speaks of the most important cultural aspect of democracy as being the autonomy of institutions. "This autonomy of institutions really contains and embodies all the other principles of democracy" (229) as he goes on to show with reference to modern political democracy.

He proceeds next to show the way in which, as society develops, the sources of authority which were spread over a variety of institutions can become collected together and used to develop oppressive authority. He traces this development with reference to religion, wealth and political power, and notes the dangers which arise when these three types of power become linked together. It is in the separation of powers that safety lies (251).

The nature of political power is brought out through a distinction between the "tribe-nation" and the "tribe-state". The former consists of the people living in a particular area and speaking a common language and having a common culture, *i.e.* a common system of inter-related institutions. The latter is based on a different principle of unification, *viz.* that of unification by political force, the development of which is traced on page 258 and the following pages. The tribe-nation and the tribe-state may be contemporaneous, or there may be a number of independent state units within the one cultural unit, or again a single political unit may include a number of different culture groups. When the two coincide the working of the culture as a whole is facilitated, and conflicts

which may arise between the various institutional groups are settled through the intervention of the group having political power. The nation is protected against aggression and prepared to attack. Under these conditions the tribe-state can be described as one of the institutions of the tribe-nation. "In so far as it remains true to its primary function as arbiter, as moderator, as an agency for balancing and adjusting institutional interests, it is an essential pre-requisite of freedom" (268).

The state becomes a peril to freedom when it is used as an instrument of aggression against other states or nations. And the peril is internal as well as external. For nations as cultural wholes, Malinowski asserts, are essentially peaceful, and there is never any clash of interests which would lead to conflict between two cultures. Hence a war can arise only as the results of the acts of a state, *i.e.* of the particular group which wields the organised power of the nation; and it is only when this group is able to "mobilise, control and discipline" a part or the whole of the members of their nation, and use the natural cultural resources (including the economic) for aggressive action, that it is able to engage in war (271). This mobilisation and control is a direct contradiction of the normal functions of the state as an instrument of national culture; particularly in modern times, when the resources of the state make it possible for the entire culture of the nation to be changed in the interest of aggression. Totalitarianism involves a cultural revolution of this kind. "It is a phenomenon which embraces a revolution in the whole economic life of the nation, in its educational systems, in the manner of administering law, and in the methods by which artistic, scientific and religious activities are moulded" (307).

War, like slavery, is not a characteristic of the most primitive cultures. It arises only at certain levels of development, and while always "a catastrophe, since its essence is killing and destruction" (299), it has in its time helped to bring about cultural advance; extending the area of a particular culture, or bringing about a unification of two complementary cultures (289-290). It should perhaps be remembered that Malinowski is speaking here as an anthropologist, who "does not approach such questions from the point of view of moral zeal" (299); otherwise phrases such as "war functions creatively", "conquest becomes of real evolutionary importance", "war . . . may play a constructive part in human evolution" (290) might be taken as expressing moral approval.

Three points must be added to this, if our brief account is not to be misleading.

In the first place, Malinowski holds that war in the full sense has been absent from by far the longest period of human evolution, and that during this period probably "99 per cent. of the great and real inventions, creations and principles" are to be found (290).

In the second place, the "creative period" of war belongs to a relatively early stage of human history, and war can be creative only

so long as it remains occasional and partial (301). With the extension of the size and power of nations in modern times, war can function only destructively.

In the third place, the cultural advances which have in the past been brought about by war can now be brought about without war. "Nowadays no violence is needed for the breaking down of barriers and the development of the cultural process." All this can now be attained "by means of peaceful discussion and negotiation at the council table" (293, 299).

The main theses of the book are summed up, negatively, in the chapter on Totalitarianism, which in the interest of world domination destroys all the characteristics indispensable for culture. Malinowski sees only one ultimate safeguard against this, *viz.* limitation of the power of national states by the creation of a controlling world institution, which he envisages as a Federation of Nations backed by an international force.

The discussion of Freedom is limited by the fact that the book was written with a view to the examination and criticism of Hitlerite Totalitarianism. In preparation for this criticism, it was natural that the argument should have a broad sweep, developing a concept of freedom which "could be used for any culture and any type of evolution", and showing under what general conditions the instruments brought into play in the service of free cultures were able to be used in the interest of aggression, and pointing out the ways in which this use endangered freedom. It was unnecessary for this purpose to work out in detail the conditions under which a multiplicity of autonomous institutions could function satisfactorily in modern complex communities. But for a discussion of freedom on Malinowski's lines to be completely satisfactory, these conditions must be worked out.

From this point of view, the most the book gives is an account of conditions necessary for freedom. It is not shown that these conditions are sufficient; it is not even made clear that it is possible for them to be realised in modern communities.

Malinowski does mention the new problems raised by the advance of technology, with its effects on economic activities, on the utilisation of national resources, and on the interdependence between different communities throughout the world; but he considers them only in so far as they endanger freedom by increasing the possibility of aggression. For a complete discussion of freedom, however, it would have to be asked whether they endanger freedom directly, quite apart from aggression. It has to be asked, *e.g.*, whether large scale industry can function efficiently in such a way as to preserve freedom for all those participating in it in the three phases of purpose, execution and enjoyment of results; and again, whether the development of large industries is compatible with the autonomous functioning of other institutions. These questions are touched on, and it is noted that the modern situation involves both a large measure of centralised

control of many institutions within each community and some co-ordination and control of the activities of all communities by some world organisation (107 f.). We have still to ask whether such control is compatible with the autonomy of the institutions thus controlled. Until this question is answered with reference to the conditions of the modern world, the conception of freedom as an attribute of cultural process as a whole, remains problematic.

I think that so long as the discussion of freedom is incomplete in this way, the general case against a totalitarian society, in the sense of a completely integrated and unified society, is incompletely made out. And it is very desirable that the case against any form of totalitarianism should be complete.

There is a further general point which must be touched on briefly. Many of the assertions to be found in the course of the book depend on the way in which terms are defined. The statement, *e.g.*, that wars have occurred during only a small part of human evolution depends on the distinction between mere sporadic fighting, civil war (*i.e.* fighting between organised forces within the same culture) and war proper, which is between peoples with different cultures, and involves not nations, but states. Hence this statement is not contradictory of the statement that war is as old as mankind, which rests on a different definition of war. Again the statement that war occurs only between states and never between nations, since no nation has ever been a completely armed camp, and since the interests of one nation as a cultural agent have never been at variance with those of another, is described as rather a truism than a paradox (271); it appears to depend for its validity not merely on the definition of the term "state" but also on that of the term "culture". It seems to involve the denial that military institutions are cultural. But the statement that the interests of nations as cultural agents have never been at variance seems to involve more than this. It seems to involve describing as aggressive and not cultural any institutions by which a particular nation is led to make a policy of changing the institutions of other nations in some way. Otherwise it is doubtful whether the statement could be upheld in the case of the communities inspired by any of the great proselytising religions.

The concept of culture, which began by being purely sociological, has here taken on a moral aspect.

Again, if economic institutions are included among cultural institutions, it is not at all clear that the interests of the great industrial nations in the development, say, of the supplies of oil or of other important raw materials in various parts of the world are not at variance with the cultural interests of the peoples in whose countries these materials are to be found. The problem is much too complex to be dealt with on any general lines. And the concept of "interest" needs a great deal of clarification.

There is a further point closely connected with what has just been said. We have seen that Malinowski asserts that nowadays barriers

between different cultures can be broken down, and the development of the cultural processes in different nations can be brought about, without resort to violence, by means of peaceful discussion and negotiation (293). In regard to this I think we are entitled to press the point made by himself (73) against the concept of subjective freedom, viz. that nothing "can" be done until "all the conditions sufficient and necessary" for its execution are present. The present state of the world leaves much to be desired in this respect. Not all resort to violence can be branded as a mere lust for conquest; despair of achieving one's ends by discussion and negotiation, because of a genuine conflict of cultural aims, is a powerful motive to violence. Once again, the problems are more complex than Malinowski's treatment would suggest.

The fruitfulness of the concept of freedom, as an aspect of the cultural process as a whole, is seen in the way in which it determines the entire argument of the book. As an analysis of one aspect of freedom, which we might call engaged-freedom, it seems admirable. But I think that Malinowski is much too cavalier in his treatment of what he calls free-floating-freedom. He is not interested in any aspects of freedom which do not produce outward cultural effects. He is prepared to include disengagement in his concept, so long as it contributes to social process in the end (85). He does not think of it as having any value of its own, or as something which it is desirable that society should safeguard for its members. I think of it, on the contrary, as an essential complement to engagement, and not merely as instrumental. Effective action and smooth running process can easily be over-emphasised. I do not want always to be pulling in harness (242), even though the harness fits me and I have some say in the direction in which I and others pull.

We must be grateful to Madame Malinowska for her care in producing this book. There is much that Malinowski himself would have altered in final revision, cutting out repetitions and drawing the argument more tightly together on occasion. But the book is a model of method. The value of the analysis of institutions for a discussion of the problem of freedom is amply shown. The whole treatment is lucid, and there is never any doubt as to what is involved in the argument. It may be added that taken along with *A Scientific Theory of Culture* it forms an excellent exposition of Malinowski's general views on Sociology.

L. J. RUSSELL.

VII.—NEW BOOKS.

The Analysis of Political Behaviour. An Empirical Approach. By HAROLD D. LASSWELL, International Library of Sociology and Social Reconstruction. London, Kegan Paul, Trench, Trubner & Co., Ltd., 1948. Pp. ix + 314. Price 2ls.

PROFESSOR LASSWELL is well known for his factual studies of national and revolutionary propaganda and for his insistence on the value of psycho-pathological discoveries for the understanding of political events and policies. In the course of his work on these and associated topics he has reached some interesting conclusions about the analysis of political notions and the methods and scope of political science. These conclusions were stated with brevity and point in his *Politics: Who Gets What, When, How* (English edition, 1937). The present volume consists of a series of fifteen papers published between 1932 and 1943, in which the ideas sketched in that work are applied to a number of special problems, such, for example, as the problem of how to teach law. One additional paper (pp. 279-286) was written specially for this volume. Three of the other papers are the joint work of Professor Lasswell and other authors. The scope of the whole can be seen from the titles of the three parts into which it is divided, which are: I. How to Integrate Science, Morals and Politics; II. How to Analyse Politics; III. How to Observe and Record Politics.

In Professor Lasswell's view politics is the study of power. This is the same as to say that it is the study of influence and the influential and of the making of important decisions. Decisions are important to the extent that they affect the distribution of values among individuals and groups. Values are "preferred events" (p. 65) or "objects of desire" (p. 7). There is an enormous number of values but they may be classified under such main headings as "deference, safety, income" (p. 7). Expanded a little this means that people want to be respected, want to be free from fear of sudden death and injury, and want the material and other goods that money can buy. Bringing about the decisions that affect the distribution of values is called policy (p. 24). Policy is developed in one, some or all of four different ways. One way is by violence. This is called strategy. Another is by negotiation. This is called diplomacy. Another is by industry. This is called economy. Another is by means of symbols (speeches, books, etc.) which affect people's attitudes. This is called ideology (pp. 97, 123, 125). These, then, are the main themes "studied" in politics.

One branch of politics is political science. Political scientists "study" phenomena of the type just summarised by collecting facts and by devising a language that is closely linked with the facts so that predictive hypotheses may be formulated and tested. Professor Lasswell is very dissatisfied with the paucity of facts about the political behaviour of past societies and of our own, and shows how this situation can be remedied in our own society for our own benefit and that of posterity. Teams of observers can be organised all over the world, and agencies created able "to develop a corps of helots to perform routine operations" (p. 5). Anthropologists, psychologists and administrators will all offer their contributions, making use of social surveys, opinion polls, official statistics,

time-budgets, interviews of various types, "participant-observers", and new techniques of self-observation. In order that this can be done effectively, some approach towards linguistic uniformity among the observers would be valuable. But even in the absence of this, comparable information can be obtained if emotional and ethical terms are avoided and the terms substituted for them are given a reference that diminishes vagueness. Examples are given of how this may be done. For example, a certain gesture is regarded as a trait of a particular culture, if, say, it occurs six out of every ten times when it might have been performed. The gesture in question is a personality trait of a given individual if it is performed by him, say, six out of every ten times when he might have performed it. Thus individual traits may be fairly precisely compared with cultural traits. It frequently happens that any individual variations from cultural traits cause great indignation. When this is so the cultural traits in question are called *mores-trait*s. It will be seen from this that in the attempt to achieve a fairly precise language in which verifiable statements may be made, the social scientist will cease to talk about duties. Nor will he talk about wicked men, but rather about men who exhibit *counter-mores traits* (p. 202). When such a language is framed, it is possible to make successful social predictions. "The planned observation of the emerging future is one of the tasks of science" (p. 219).

It is at this point, I think, that Professor Lasswell has departed from the terminology employed in *Politics: Who Gets What, When, How*. In that work he distinguished political science, which "states conditions" from political philosophy, which "justifies preferences". In the present volume the distinction between these things is still drawn, but now Professor Lasswell seems more openly contemptuous of attempts by philosophers to justify preferences. For even though in one place he appears to disclaim any "depreciation of the act of discovering, stating and justifying preferences" (p. 133), he looks forward to the time when law students at any rate will only study moral philosophy "by way of warning and sophistication" and will learn how to achieve emotional freedom from "the ancient exercises" (p. 31). Thus the other branch of politics, political philosophy, appears to be abandoned. It is, however, now absorbed within political science with the name of "goal thinking". If, for example, the goal is democracy, then the nature of the goal can be more or less clearly thought out, and the methods of reaching it more or less clearly envisaged. It is a function of political science to obtain the greatest possible clarification in the statement of goals. Such clarification can only be obtained by the empirical methods already indicated, since the use of ethical words such as "right" or "just" provides us only with statements that are "normative-ambiguous" (p. 88). What is required are "operational definitions" of the main components of the goals. Thus within the science of politics there will be various sub-sciences distinguished from one another by their goals. The democratic goal, for example, may be summarised as "the realisation of human dignity in a commonwealth of mutual deference" (p. 36). There is therefore a science of democracy which "bears much the same relation to general political science that medicine has to biology. Medicine is a branch of the total field of biology, limiting itself to a single frame of reference, the disease process. Democratic science is restricted to the understanding and possible control of the factors upon which democracy depends" (p. 7). As I understand it there would also be sciences of communism, of anarchism and of any other social goals that might be conceived in future periods.

Much of this will seem distasteful, if not barbarous, not only to philosophers (who may be professionally prejudiced), but to some sociologists as well. However, it is the task of philosophy to examine and assess theories not to express horror or delight at them. I will therefore endeavour very briefly to distinguish what seems to me tenable in this view from what I regard as doubtful or misleading.

There are two main elements in Professor Lasswell's view which seem to me to be well established. In the first place his account of the scope of politics is illuminating. The more traditional account which made states and sovereign governments the central conception was constantly having to be enlarged in a haphazard manner in order to do justice to such bodies as industrial corporations or churches. Professor Lasswell's notions of "important decisions" or "influence" integrates the whole range of enquiry neatly and realistically and avoids the verbal disputes aroused when sovereignty is the governing notion. In the second place I should agree with Professor Lasswell that words such as "justice", "equality" or "freedom" are often used vaguely, and that serious students of politics should take steps so to define them, in the contexts in which they are used, that the situations to which the words refer can be identified and changes in them registered. For example, a man who aims at social justice should be as clear as possible about what states of affairs manifest it, and should be able to compare situations in which there is more or less of it. In this connection it seems to me that in one respect at any rate Professor Lasswell's inclusion of "goal thinking" in political science is an advance on his earlier dichotomy of political science and political philosophy. For on the earlier view it was possible to avoid discussion of ends altogether, just as scientists who were atheists at heart ostentatiously relegated to the sphere of "Revelation" all matters that were not susceptible of experimental treatment. But human matters cannot be divided up in this way. Ends divorced from means are not revealed to philosophers or to anyone else. Nor are means divorced from ends revealed even to the most tough minded and positivistic social scientists.

Although the "study" of ends and means is now regarded by Professor Lasswell as comprised in one body of knowledge, I am not sure that I fully understand what he means when he calls it "political science". At least part of what he means is that the empirical methods described above are appropriate in this field. But whether he means that they are the only methods appropriate to "goal thinking" as well as to the rest of the subject, I do not know. That goals should be clarified by being formulated in terms as concrete and definite as possible is undoubted. But no procedure for deciding between alternative sets of clarified goals seems to have been indicated by Professor Lasswell. He is, of course, particularly concerned with democratic goals, and his language suggests that he considers democratic societies to be the *best* societies. On page 44 he writes: "No democracy is even approximately genuine until men realise that men can be free; and that the laborious work of modern science has provided a non-sentimental foundation for the intuitive confidence with which the poets and prophets of human brotherhood have regarded mankind." And on page 111 he writes: "The psychic potential of democracy is far higher than that of despotism, since people are at their best when their total energies are released in respected lines of activity". These are the kind of cheery utterances which some social specialists are prone to make when they approach broader themes than they have

been wont to deal with. They fail to convince because they are so obviously thrown in as afterthoughts. As science they are weak and unsupported, and as philosophy or casuistry they are insufficiently developed. Professor Lasswell is right in saying that an understanding of people and social processes is necessary to the fulfilment of moral intentions in complicated situations. But in order that proper use can be made of such understanding, a more subtle approach is needed to the distinction between what is and what ought to be.

My second criticism concerns Professor Lasswell's tendency to adopt a terminology from which ethical elements have been removed. This may well be useful in certain *departments* of social science. But I suggest it can be very misleading when done on a large scale. Professor Lasswell tends to talk, for example, about "preferences" in contexts where other people talk about moral choices. But the word "preference" is generally used in contexts where what is preferred is regarded as relatively unimportant, such as a choice of food or entertainment. To call a man's moral choices his preferences risks confusing different things. Indeed, it does more than this, for it actually suggests that there is no difference in importance between them. For if a word normally used to refer to relatively unimportant choices is used to refer to those important choices where a specially impressive set of words has hitherto been regarded as appropriate, the effect is to suggest that nothing is more important than the relatively unimportant. If this is so, it seems to me to provide some justification for the revulsion commonly excited by the use of naturalistic language in discussions of political fundamentals.

A further instance of this is Professor Lasswell's constant use of the word "ideology". He says that ideology is the attempt to obtain favourable attitudes by means of symbols (p. 125). Further, he appears to equate ideology with "political mythology" (p. 143). He also uses it in the narrower sense (suggested by Mannheim) of "the mythology of the established order" (p. 197). Now if, as the passages quoted above appear to suggest, Professor Lasswell thinks that democratic societies are the *best* societies, then the word "ideology" is a singularly inappropriate one to use in connection with the democratic outlook. Yet he frequently talks about the "democratic ideology" (p. 97), and the ideologies that compete with it, as though there were nothing to choose between putting over a lie which promotes the interests of a group and defending the superiority of a certain way of life. Nor are matters much improved when we realise that "mythology" is used in a special sense to stand for what cannot be verified in the "scientific" manner. For this usage suggests that what is not "science" is baseless or fantastic. If this is meant it should be stated. If it is not meant then a different phraseology is necessary.

In conclusion I must say that both my summary of Professor Lasswell's views and my comments on them are confined to the elements that seem to me to be of special interest to philosophers. I have laid particular stress on the terminology he uses and advocates, because he himself regards it as important and makes enthusiastic reference to logical positivism and to the "science of communication" (which is in its infancy), and makes free use of such words as "syntax" and "semantics". But apart from all this, the book abounds in concrete discussions of particular problems. This is not the place to examine these, but it would be wrong for me to conclude without remarking that Professor Lasswell's flair for ingenious social enquiry is obvious and unchallenged, and that his

imaginative application of psycho-pathological conceptions to the political and administrative spheres promises to be of practical value.

H. B. ACTON.

The Ground of Induction. By DONALD WILLIAMS. Cambridge: Harvard University Press (London, G. Cumberlege), 1947. Pp. vii + 213. Price, \$3.00, 16s.

"If there is any puzzle about induction . . . it is how we manage to go wrong as often as we do."¹ This expresses the confident and cheerful outlook of this interesting and surprising book on induction. Professor Williams claims here a solution to the problem of induction, the problem, as he conceives it, of "whether and why a knowledge that in an observed part of a class M the property P is present in a certain proportion gives us a reason . . . for believing that in the whole of the class M the property P is present in a similar proportion, or for believing, if most of the observed M's are P, that any one unobserved M will have the property P".² Whether or not Professor Williams has adequately met the objection that this conception restricts his proposed solution to those inductions to which the reckoning of cases is relevant, a claim to a solution even in this restricted area would be a matter of interest; particularly when the proposed solution (a) dispenses with the assumption of antecedent *a priori* probabilities and with inverse calculations of probability, (b) denies the necessity of any assumption about the order of nature and finds the justification of induction in an *a priori* principle, the logical law of large numbers.

The unique feature of Professor Williams' account of induction is the combined use of the proportional syllogism and the *a priori* law of large numbers to show that the inference of an inductive conclusion of approximate accuracy is *necessarily of a high degree of probability*. First, proceeding on the assumption that an induction is valid, and hence justified, only if the relation between premises and conclusion is "according to logic",³ Professor Williams maintains against Hume that the relation is *as necessary* as entailment (though "of less degree"). Just as the premises of the

proportional syllogism "If $\frac{m}{n}$ of a class M is P and a is M, then there is a probability of $\frac{m}{n}$ that a is P" entails the conclusions "a is P", "a is not

P", respectively, when $\frac{m}{n}$ is 100 per cent. and 0 per cent., so premises involving any of the infinity of fractional proportions between 100 per cent. and 0 per cent. relate the conclusion by "an equally necessary lesser connexion"⁴ of fractional degree $\frac{m}{n}$. The graded series of probability, implications are all necessary, but such that the conclusion ("a is P" say) is not contained in the premises, i.e. such that the conclusion can be false although the premises are true. To this reviewer this account sounds suspiciously like holding that the relation is necessary but not necessary.

¹ p. 167.

² p. 20.

³ p. 23.

⁴ p. 32.

The problem of inferring from the observed to the unobserved is conceived by the classical theory of probability as one of "inverse" probabilities. Bernoulli's principle permits reckoning the direct probability that a sample will have a certain composition, given the population (the class in which it is included), whereas what is wanted in an induction is the inverse: the probability that the population has a certain composition, given the sample. Professor Williams reduces these two to a matter of reckoning, directly, that the sample and population (approximately) match. After the analogy of the proportional syllogism, if the great majority of counters are red, then the counter we draw will very probably be red, he argues: if the majority of similarly sized samples nearly match the population M, then the sample MQ will very likely do so. MQ is treated like a single counter, the large majority of these counters being marked with the true composition. Now the fact that the large majority do match the population within a certain range of approximation is an *a priori* law of classes, provable, as Professor Williams shows, by the arithmetic of combinations. The larger the sample the greater the majority of nearly matching sets. This is the law of large numbers which

is claimed to be sufficient for the inference from " $\frac{m}{n}$ MQ is P" to " $\frac{m}{n}$ M is P" to be probable. By coupling it with the observational premise that the sample drawn has a property P in a definite proportion we may conclude, with necessity, that very probably this sample matches the population (has the property in the same proportion as the population) and hence that the population matches it. Thus, given that $\frac{1}{2}$ of a sample has P, it is highly probable that the population has P in nearly the same proportion. Knowing *a priori* that the majority of samples are statistically similar to the population, we can conclude that the population very probably is similar to the given sample.

The law about classes (his "inductive principle") differs from the major premise of the ordinary proportional syllogism ($\frac{m}{n}$ M is P) not only in being *a priori* but in being statable approximately rather than exactly: It can only be stated that a majority of the samples of the same size do not differ from the composition of the population by more than a certain per cent. The larger the samples the more likely they are to match the population to a close degree of approximation, that is, the probable disparity between sample and population becomes less and less. The degree of approximation σ is figured under the most unfavourable circumstances, namely, when the population of M is very large and when the probability of matching is least (when half of M is P and half non-P). With a sample of 2,500 the deviation σ would not be more than 1 per cent. for 68 per cent. of all such samples, not more than 2 per cent. for 95 per cent. of all samples, (see pp. 85-90). From these facts it is inferred that the actual sample drawn has a probability of at least 68 per cent. of not differing from the population by more than 1 per cent., a probability of 95 per cent. of not differing by more than 2 per cent., etc. Where we do not know the number of the population or its composition we reckon the probability on the conditions which make it least, and still find it a large one.

This is a remarkable result, and whatever Professor Williams' admitted debt to Peirce, a novel one. Without any assumption to the effect that all compositions of the population are equally probable *a priori*, or that any sample drawn is equally as likely to be chosen as any other, without

presupposing that nature is uniform, a most plausible and persuasive exposition provides us with a guarantee that inductive inferences about actual unobserved classes, present and future, are very probably very nearly correct. Whereas Hume contends that there are no grounds for supposing the future will resemble the past, Professor Williams contends that our knowledge of the past necessitates that very probably it will.

There can be no denying the analytic fact that any given class contains a majority of samples nearly matching it in composition. But it is another matter to hold that a class not yet given in entirety (a class which may change its composition radically in future) must contain the same distribution of matching samples as at present. Only if this stability of composition were known to be the case could one infer that the presented sample would probably be matched by its population. Further, about the presented sample (as contrasted with some possible but unrepresented sample) one would seem to need some assumption about its method of selection in order to infer that probably it very nearly matched the population. One would seem to need assurance that any sample is equally as likely to be drawn as any other. Only thus would there be any ground for supposing the proportion of samples drawn having a certain distribution of P was the same as the proportion of such samples in the population. It is not an *a priori* law of classes that the majority of samples drawn nearly match the population. But this is what is needed for an inference with regard to a particular sample. (Even if all similarly sized samples are equally likely to be drawn, it would be only probable, rather than necessary, that the majority of samples actually drawn nearly matched the population.) If it is necessary to assume that one's method of selection is such that every sampling is equi-probable, then Professor Williams' proportional syllogism is incomplete. This is not to say that Professor Williams has not canvassed this and other problems that have troubled writers on induction. It is with special care to evade certain difficulties in other views that he has formulated his own view, which simply dispenses with what are crucial sources of difficulty, *e.g.*, the classical postulate that all compositions are antecedently equi-probable and the assumption that nature is uniform. Whatever the very considerable merit of this parsimony, it seems too much to hope that what is left will guarantee high probabilities to inferences about actual unobserved cases.

Even less can it be hoped that inductive evidence can be used in accordance with his theory to settle philosophical issues. Professor Williams holds out the hope that philosophers can answer their questions by using the methods and results of the sciences. Philosophical questions are treated as being of the same order as empirical questions. For example, it is supposed capable of being shown inductively that solipsism is "a wantonly improbable hypothesis";¹ "the practical success and logical validity of perception are explained . . . by our sampling theory";² the application of the logic of induction to evidence is expected to decide between various metaphysical theses. Professor Williams readily admits, however, that these claims can be divorced from his theory of induction.

ALICE AMBROSE.

¹ p. 171.

² p. 169.

Introduction à la lecture de Hegel. By ALEXANDRE KOJÈVE. Pp. 597
Paris, Gallimard, 1947. Price 640 fr.

HEGEL once described his *Phänomenologie des Geistes* as his voyage of discovery. He also said that the book contained a good deal of ballast which might be thrown overboard in a subsequent edition. Unfortunately, the unballasted edition which he was preparing at his death never appeared, and his readers are left with the original exploratory voyage, a voyage which seems to many of them to have been made mainly in the dark and through mists and fog. For this reason a commentary has long been desired, but it is really only in recent years that clues to some of the book's difficulties have been made available through the publication of Hegel's early manuscripts. Dilthey founded the modern critical study of Hegel by drawing attention to the theological writings of the philosopher's *Wanderjahre*, and these were published by Nohl in 1907. It is a pity that J. B. Baillie seems to have overlooked them, for these indispensable aids to the study of the *Phenomenology* might have enabled him to improve the notes appended to his translation. Scarcely less important, however, are the Jena manuscripts published partly by Lasson in 1923 and partly by Hoffmeister in 1931-2. Armed with these *reliquiae* a scholar could approach the making of a commentary with fair confidence.

This is what has been done in France by Dr. J. Hyppolite who in 1939-41 published a masterly translation of the *Phenomenology* with excellent notes, and who followed this in 1946 with a massive work called *Genèse et Structure de la Phénoménologie de l'Esprit de Hegel*. Previous commentators (e.g. Nink, Bruijn, and Contri) have not advanced beyond the first few chapters of their text; but Hyppolite has tackled the whole book and illuminated its detail to a greater extent than any of his predecessors.

M. Alexandre Kojève lectured on the *Phenomenology* at the École des Hautes Études from 1933-39, and the book now under review has been put together out of these lectures by M. Raymond Queneau, because, we are told, M. Kojève's present activities have not permitted him to write the introduction to Hegel which has been expected from him. It is very unfortunate that M. Kojève has been unable to recast his lectures into a commentary on the *Phenomenology*; he clearly has much of interest and value to say, he has used the Hegelian *reliquiae*, and his own book would have saved us from the somewhat undigestible hotch-potch which is now before us.

En guise d'introduction we are offered a translation of part of chapter iv of the *Phenomenology*; this had already been published in a periodical in 1939. Of this effort it is only necessary to say that neither in elegance nor in succinctness nor in clarity will it stand comparison with Hyppolite's work.

The next 120 pages are devoted to the first six chapters of the *Phenomenology*, and they seem to consist of notes taken by a pupil at lectures. A persevering reader will find material here which supplements Hyppolite's books, but he will also find that M. Kojève is often a less reliable guide especially on points affecting religion. In the main, the treatment is fragmentary and concerned with matters of detail, but this section of the book is supplemented by an appendix of 130 pages containing the full text of lectures on Hegel's dialectic and on the significance of death in Hegel's philosophy.

The remaining 300 pages contain a minute analysis of the last two chapters of the *Phenomenology* (i.e. of the last ninety-two pages of Hoffmeister's German text). Here also the reader has before him not an abstract of M. Kojève's lectures but a full text taken down in shorthand.

It must be clear from this bare summary of the book's contents that, despite its title, the book could hardly be less adapted to be an introduction to the reading of Hegel. It is simply a commentary on the *Phenomenology*, detailed and diffuse in parts, scrappy elsewhere; but, though beginners may find it hardly less formidable than Hegel's *ipsissima verba*, it will certainly interest and stimulate advanced students.

The most valuable part of the book seems to me to be the remarkable essay on Hegel's dialectic and phenomenological method (pp. 445-526). Indeed, this essay really serves as a summary of the whole book and as exemplifying both the author's strength and his weakness. He has a gift of lucid exposition, and when he is expounding the dialectic not as a method of discovery but as a characteristic of the world of history as it unrolls before the philosopher's eye, he is superb. But unfortunately, he has a theory of his own about Hegel's conclusions which can hardly be reconciled with what Hegel says, and when he rides his hobby-horse through the chapters in which Hegel discourses on religion and absolute knowledge, he is more bewildering than enlightening.

His thesis is that Hegel is in a position to understand history only because he stands at the close of history. Driven by the desire for liberty and recognition, man finally builds a universal and homogeneous state (the Napoleonic Empire) in which all human desires are satisfied; reflexion on this satisfaction then produces the absolute knowledge which displaces religion. For religion, spirit is God; but Hegel, the sage, knows that spirit is mortal man, and his philosophy is a form of historicism which rejects immortality and accepts atheism.

To defend this thesis requires both learning and ingenuity, and these are not qualities in which M. Kojève is deficient. But although it might be argued that Hegel, to be consistent, ought to have embraced atheism, it lies beyond human powers to convince Hegel's readers that he did in fact do so; and M. Kojève is human like the rest of us. It is true that Hegel's tantalising and apparently needless obscurity lends itself at times to almost any interpretation; but a commentator should then at least try to adopt an interpretation which is in harmony with the rest of Hegel's works. M. Kojève, however, is apt to leave all reasonable probability behind. For example, at the close of chapter vi Hegel tries to show how, through the experience of the forgiveness of sins, spirit comes to realise that God is not purely transcendent but is present and revealed in the stages of human history; and this leads on to the treatment of religion in chapter vii. M. Kojève, so far from realising that at the end of chapter vi Hegel is concerned with the transition from the moral consciousness to the religious, asserts that in this passage the *erscheinende Gott* is Napoleon and that Hegel is explaining and justifying the Napoleonic phenomenon to Germans and hinting that he wishes to be called to Paris to play the part of a second Plato to a second Dionysius! This startling suggestion might be dismissed as a mere temporary aberration if M. Kojève did not make it thrice in the course of his lectures.

Obsession with the idea that Hegel thought he lived at the end of history seriously detracts from the value of all that M. Kojève has to say about the perplexing final chapter on Absolute Knowledge. Religion, he

thinks, is an historical and temporal phenomenon, but Hegel's "wisdom" arises only at the end of time. But when he comes to support this thesis by a quotation from Hegel, his translation becomes misleading. What Hegel says is that religion expresses, earlier in time than philosophy does, the nature of spirit; but M. Kojève's French obscures the implication that philosophy too is in time (p. 395).

M. Kojève believes that a true philosophy is based on atheism and on the doctrine that the world of concepts is the world of time; this philosophy, he thinks, has been adumbrated by Hegel and Heidegger and now needs to be developed and worked out in detail. It is perhaps a pity that he has not devoted himself to this project, to working out his own philosophy, instead of trying to father it on Hegel.

In the course of studying the French books mentioned in this review, I have had occasion also to use J. B. Baillie's translation of the *Phenomenology*. I may perhaps be allowed to conclude by saying that while that translation is a fair guide to the general drift of Hegel's argument, it is rather too free and vague in detail to be a safe substitute for the German text.

T. M. KNOX.

Tommaso Campanella, filosofo della restaurazione cattolica. By GIOVANNI DI NAPOLI. C.E.D.A.M., Padua, 1947. Pp. 532. 1000 lire.

MR. DI NAPOLI has read a large number of books, reviews and essays concerning Campanella and his philosophy, and takes care to quote everything he has read or heard of.¹ The book indeed may be recommended to any historian of modern philosophy as a complete store of quotations and references. Unfortunately Mr. Di Napoli himself proves unable to profit from this wealth owing to his limited acquaintance with philosophers and facts not immediately related either to Campanella or to Neo-scholasticism.² On the other hand, when Mr. Di Napoli finds himself up against a blatant contradiction in his author he tries half-heartedly to render him consistent but arrives at no definite conclusion and too often leaves the question in mid-air, passing on blithely to quote passages from several works by Campanella without any attempt at co-ordination. In effect the book is a dictionary of quotations only loosely kept together by sparse observations without any unity or substantiation.

In point of fact, Mr. Di Napoli's aim is not an unprejudiced evaluation of Campanella's ideas and place in the history of philosophy. The very title of his book points to a conclusion he means to reach anyway. On

¹ His all-embracing bibliographical accuracy is such that I have found quoted even a very jejune essay of mine on Campanella I had almost forgotten and hoped was forgotten by everybody else.

² The indiscriminate use of the term "critical" to mean "epistemological" (p. 255 ff.), the cutting statement that metaphysics, according to the author of the *Prolegomena to Any Future Metaphysics*, were an impossible dream (p. 263), the assertion that according to Locke abstraction is merely the consideration of "a part" leaving some other "part" out (p. 279), the description of Lutheranism as "false reformation" (p. 81), the belief that all Protestants maintain the dogma of predestination to hell (p. 199)—these are only a few of the incongruities to be found in this book.

the other hand, the point of view is interesting in itself. Conceptions of Campanella's philosophy have always been influenced, in the last ninety years at least, by the political climate prevailing in Italy and a history of Campanellian criticism offers a running commentary on the successive fashions of thought which have obtained there.

Campanella himself changed his ideas and the meaning of his recurrent *dicta* according to the political climate,¹ and even in strictly philosophical works he did not always enforce the same fundamentals. He changed his mind. But the critics have not spared their efforts and have thus lent him a spurious coherence.² Unfortunately this way of approaching the history of philosophy, which began some twenty-five or thirty years ago, is still usual in Italy. The main fault lies with the Italian Neo-hegelians, with Croce and Gentile, who in consequence of their historicism have maintained that there is no essential distinction between philosophy and the history of philosophy. Philosophical training and skill have not been required in order to deserve consideration as a philosopher. Many scholars have written about this or that thinker, merely to say something new about him, and have thereupon been considered full-fledged philosophers. The "interpretation" of a system of philosophy according to the prevailing fashion has been the only fruit of recent philosophical research in Italy.

In the case of Campanella an even heavier responsibility lies on the shoulders of the idealist. During and after the Risorgimento, Hegel, being a German philosopher, could not hope for any great following in a country that was striving to be liberated from "the German". Hegelians had first to "naturalise" Hegel in Italy, and this was done by maintaining that the Italian philosophy of the late Cinquecento (which was styled "philosophy of the Renaissance" under the mistaken impression that it was only a result of the efforts of the humanists of the Quattrocento towards a revival of Platonism) was the real source of Descartes' rationalism. As a lineal descent from Descartes to Kant and from Kant to Hegel was surmised by the Hegelians, Hegel was assumed to be the heir of the Italian "philosophers of the Renaissance". The connecting link between them and European thought was represented by Campanella. According to the well-known Hegelian slogan, modern European philosophy resulted from the "discovery of the self" as the foundation of any philosophical system, and Campanella had insisted on the existence in us of a *notitia abdita*, of a hidden knowledge of ourselves as the basis of all knowledge. This *notitia abdita* was just the same as Descartes' *Je pense*. The fact that Campanella had lifted this idea bodily from St. Augustine and that he derived the best proof for it from "natural magic" and universal animism

¹ In the *Monarchia di Spagna* Campanella maintained the pretences of Spain to universal empire; in the *Monarchia Messiae* he supported the Papal rights to universal domination; in the *Città del sole* he described an ideal Christ-less and kingless republic; in the *Monarchia di Francia* he incited France to grasp the domination of the world.

² This book offers many examples of such thankless enterprise. For instance Campanella himself wrote in his *Philosophia Realis* that he had previously erred in insisting that knowledge of truth is the function of sensation. Mr. Di Napoli will not allow Campanella to have changed his own mind and against his author's own opinion he tries to prove that between his former and his later position there is really no contradiction at all (p. 275).

(the official scientific theory of the Cinquecento thinkers) was disregarded. Campanella was an idealist *avant lettre* and *sans le savoir*.

Campanella's is indeed one of those putty-philosophies to which any shape may be given by the historian. His budding fancy, his logorrhæic inclination to write any number of pages on the least provocation, his changing political outlook, the evident falsity of many of his assertions, his reiterated retractations make it easy to ascribe him to any philosophical school. The idealists underlined Campanella's subjectivism, made light of his metaphysics and considered his panpsychism as an inchoate stage of his "true" philosophy. His protestations of dutiful respect towards Catholicism were attributed either to weakness or to downright hypocrisy. Croce, for instance, considers Campanella as something of an intellectual cheat throughout his career.

Sober historians have tried to explain Campanella's ideas on the basis of the usual conception of the Renaissance as an epoch of individualism and increasing incredulity. His deism in the *Atheismus triumphatus* and the unchristian character of the religion obtaining in the City of the Sun seemed to them an effect of the Renaissance. Deism is in fact a side-issue in his philosophy. But the reclamation of Campanella to anticlericalism brought Catholic critics into the arena. The first sign of reversal of the current ideas on the subject appeared in a short essay by Déjob (1911) in which he tried to prove that Campanella was not a deist.

To the Catholic the question was indeed a burning one. Campanella had been put in prison by Spain and kept there long years before being liberated by the intervention of the Holy See. He then became even *persona grata* with Pope Urban VIII. By way of contrast, just at the time that Campanella was beginning his long imprisonment, the same ecclesiastical powers had, with peculiar gusto, burnt at the stake Giordano Bruno, whom the idealists associate with Campanella as an originator of modern European philosophy. Nobody can doubt that according to the lights of the Catholic Church, Bruno was justly burnt. He was a confessed pantheist. But he professed to be a good Catholic and never tired of denouncing Protestantism, as did Campanella, who was yet no less a pantheist than Bruno. Was not Campanella's deism a good enough reason to deal with him as Bruno had been dealt with? And instead he was caressed by the Pope, helped by ecclesiastical authorities, and died quite comfortably in his bed. The Church might well be accused of partiality, or of short-sightedness. Therefore Campanella's whitewashing became an *obligato* for Neo-scholastic historians. They were bound to prove that Campanella's deism was a fiction, his idealism a hasty conclusion from some minor points of his philosophy. This reaction could not stop at a sufficient establishment of his orthodoxy. It went on until Campanella was transmogrified into a Catholic philosopher, nay into the philosopher of the Counter-reformation. The panpsychist, the possible atheist, the utopian advocate of a State without Christ was replaced by the upholder of the rights of the Church and of her claims to universal domination.

This last was indeed maintained by Campanella in his *Monarchia Messiae*, but certainly it cannot be called a Counter-reformation idea. It was neither the official nor the concealed programme of the Church in the relevant historical period. At that time the Church aimed at using the existing temporal powers to reconquer to her spiritual domain the ground which had been lost under the first impetus of the Reformation. She was prepared to help either France or Spain according to their greater or lesser

propensity to forward the cause of Catholic religion with their armies. What Mr. Di Napoli really means by "Counter-reformation" and what Campanella seems indeed to favour in some of his writings, is not Counter-reformation but the ancient medieval programme of a universal monarchy of the Pope as it was proclaimed and attempted by Gregory VII, Innocent III and other pontiffs. It is a political programme and not a religious one.

But this has drawn the attention of critics to the politics of Campanella. Under the Fascist regime it would have been in very bad taste to have accepted without a protest his communism, as proclaimed in the *Città del Sole*. Critics went therefore in search of his authoritarianism and, of course, found it. With the sliding of Fascism towards clericalism, Catholic and Fascist tendencies coalesced. Campanella appeared as the first exponent of Italian supremacy, side by side with Gioberti, who had also maintained the primacy of Italy as the country of the Papal See and the potential centre of a universal Christian empire.

These vagaries were in a sense useful, because they put Campanella more *à la page* than ever, and a brilliant group of scholars, notably De Mattei, Firpo and Amerio, brought to light a number of *inedita* and checked again our positive knowledge of his writings, so that some future student may yet collect all the available evidence and give us a first objective study of Campanella the philosopher.

Mr. Di Napoli proves *per absurdum* that such a study cannot be done on the assumption that Campanella was the philosopher of "Counter-reformation". This means indeed making of his philosophy an *ad hoc* philosophy, excogitated with the deliberate aim of forwarding the universal domination of the Pope. Were this true, his theoretical opinions would be a side-issue. He would have been a politician and not a philosopher. Mr. Di Napoli seems indeed to incline to this point of view.

One is bound to say "seems" because the book is written in such bad Italian, that one sometimes remains in doubt about the author's real meaning; and he frequently contradicts himself in praising Campanella for incompatible reasons. The book is meant as an apology rather than a monographic study, and an apology by a writer who has the same weakness for exaggerated statements as Campanella himself. The latter would indeed have approved wholeheartedly of a writer who regards him (p. 260) as a greater thinker than St. Augustine. For did not Campanella affirm of his own works that they seemed to have been written by an angel rather than by a man?

MARIO M. ROSSI.

Le Vrai Visage de Kierkegaard. By P. MESNARD. Beauchesne et ses fils. Paris, 1948. Pp. 494.

It is natural that the present vogue of Existentialism in France and elsewhere should revive interest in Kierkegaard as the father of this kind of philosophy. Whatever be the philosophical value of his doctrines, he has exercised too much influence on subsequent thought to be regarded as other than an important historical figure. An author at once so voluminous and so varied is in manifest need of interpretation and criticism such as the French mind is peculiarly fitted to supply, and the good work begun by Jean Wahl has been well carried on by Professor Mesnard, who writes from the point of view of a Roman Catholic. He is interested

in Kierkegaard's religious views at least as much as in the philosophical doctrines with which they are so closely intertwined. His long book is both lucid and carefully documented—a fine work of scholarship illuminated by occasional flashes of French wit. A very full bibliography contains interesting suggestions as to the best way of approaching the study of this singular author.

It is particularly hard to deal with a professedly 'subjective' philosophy 'propounded by an existing individual for existing individuals'. Such a philosophy is primarily an attempt to deepen the writer's own 'inwardness' and has consequently to be understood as a kind of psychological autobiography, however much this may be masked by the ingenious disguises and mystifications in which Kierkegaard took such a perverse delight. As Professor Mesnard says, '*La philosophie de Kierkegaard se confond avec la transposition doctrinale de son existence*'. The first hundred and thirteen pages are consequently devoted to a life of Kierkegaard, and this forms a valuable corrective to the rose-coloured views of Dr. Lowrie, who says of the arch-mystifier, 'I have never encountered a man so honest as S. K.' The remainder is occupied with a careful analysis of Kierkegaard's works from his doctorate thesis on irony (which gives a key to much that follows) to his final crusade against the Lutheran church of Denmark. Special attention is given to the *Unscientific Postscript*, his most important contribution to philosophy. But the whole of this careful analysis is also, as it ought to be, a searching examination of Kierkegaard's psychological development. Particularly revealing is the section on '*The Psychoanalysis of Frater Taciturnus*'. In spite of its title it is commendably free from modern jargon, and it argues—to my mind convincingly—that Kierkegaard suffered from the same kind of sexual disability as John Ruskin. In the light of this the whole extraordinary affair with Regina Olsen becomes intelligible and with it a great deal of Kierkegaard's morbid attitude to life and religion. When we remember too the despair introduced into his life by his relations with his father, we can only pity his vanity and self-absorption and admire the literary effort which was the fruit of his sufferings.

A sound philosophy—especially if it aims at being 'subjective'—is not likely to arise from such unhealthy foundations. Whatever be Kierkegaard's merits as a literary artist, his philosophy seems to have its chief value as a criticism of Hegel and an analysis of a type of experience which is fortunately rare. If we consider his five existential categories, we find that besides the obvious ones of art, morals and religion, we are presented with two others on more or less the same level—*irony* as a stage between art and morals, and *humour* as a stage between morals and religion. Both of these seem to have acquired their importance for Kierkegaard from the fact that they provided disguises by which he sought to mask his own deficiencies and his failure to be whole-hearted either about morals or about religion. In spite of his genuine, if ambiguous, concern with Christianity as a religion of suffering those whose interests are primarily religious should surely hesitate to rest their case on a doctrine (or an attitude) that is irrational, if not diseased. To defend religion because of its absurdity is a most unconvincing kind of argument, nor is the argument strengthened by such statements as these (I use Professor Mesnard's translation into French). '*Car Dieu veut assurément être aimé et Dieu est précisément, à parler humainement, l'ennemi le plus redoutable de l'homme, ton ennemi mortel; il veut que tu meures, que tu renonces à tout, et il hait la justice ce qui d'après la nature serait le charme de sa vie.*' And again,

'C'est ainsi que, pour parler seulement un langage humain, Dieu est atroce dans son amour.'

We may leave the last word with Professor Mesnard. '*Kierkegaard ne fut ni un héros, ni un saint, mais un chrétien douloureux, digne en tous points de notre sympathie la moins aveugle.*'

H. J. PATON.

Logical Studies. By the late HAROLD H. JOACHIM. Oxford: Clarendon Press, 1948. Pp. xii + 296. 18s. net.

Logical Studies has been edited by Dr. L. J. Beck from the manuscript of lectures which Joachim gave between 1927 and 1935, the year he retired from his professorship in Oxford. Thanks to the meticulous care with which Joachim prepared his lectures, the work of the editor has been comparatively easy: it has been a matter only of an occasional choice between drafts which differ verbally rather than in substance, and of making certain minor changes of wording. Traces of the lecture form do, indeed, remain, more particularly in the strong tendency to periphrasis which was so marked a feature of Joachim's style; but there is little of the looseness of texture so often found in posthumous publications of this kind. Joachim was in fact quite uncompromising as a lecturer, his procedure being to read to his audience from what was, for all practical purposes, the draft text of a book in the making; and while this must have made him maddening to listen to, it has the advantage of making his lectures far better material for publication than that found in the average professor's *Nachlass*.

The title of the book, it should be said at once, is a misleading one. It is not only that Joachim has nothing to say on those topics which most philosophers to-day would regard as belonging to logic; he does not even discuss problems he might himself have been expected to recognise as specifically logical, e.g., those dealt with by Bradley and Bosanquet. His aim is rather to explore the nature of logic, explaining and defending the (or an) idealist conception of the subject, and thus to supply prolegomena to logical studies rather than to contribute to logic himself. In the course of this undertaking he discusses at length many questions (e.g., the problem of truth) which would be generally considered to belong to theory of knowledge or metaphysics; and it is as an essay in those subjects that his work should be primarily taken.

The book falls into three main parts. In the first of these an attempt is made to maintain (i) that the subject-matter of logic is "knowledge-or-truth", and (ii) that its method is "reflective and critical analysis". The first of these conclusions is reached from an emendation of the "most generally accepted" description of logic as the "science of thought". There is a sense in which logic is concerned with thought, but it is not thought considered as a subjective faculty of thinking, thought as opposed to things; nor again is it thought as opposed to sense or feeling. The aim of logic is to "trace . . . the structural principles or forms of intelligibility and intelligence in one" (p. 15), i.e., to lay bare the nature of a reality which stands in essential relation to, if it is not constituted by, mind. The common antithesis of thinking subject and object thought in fact falls within an original unity which philosophy (as opposed to the special sciences) must seek to preserve; and the terms "knowledge" and "truth" are coupled together by Joachim as constituting the subject-matter of

logic in an endeavour to bring this fact out. The belief that logic is concerned with mere thinking is an error; but so is the belief that it is concerned with the merely thinkable, *i.e.*, with propositions and their forms.

How does the logician deal with his subject-matter? His method, Joachim answers, is the distinctive method of any philosophical enquiry, namely reflective and critical analysis. This sounds more innocent than it turns out to be. For a study of the nature of analysis in any field (Joachim considers several) reveals that the common conception of it as the breaking up of a whole into its ultimate parts is seriously misleading. Analysis *does* involve the breaking up of a whole; but it also involves, *pari passu*, the reconstitution of a new whole. There is in fact no analysis which is not also synthesis. Analysis and synthesis proceed together in any explanation, to explain being "essentially and in principle to exhibit an *explicandum* . . . as a structurally definite, or well-ordered, system of intrinsically related terms" (p. 38). This search for system is found in all intellectual activities, the "*modus operandi* of the intellect" being "in principle, one and one only" (p. 43); but it is in philosophical enquiries that it is most clearly exhibited and consciously pursued. And philosophy is related to common sense and scientific thinking as developed to undeveloped: the principles they implicitly embody it explicitly articulates.

It emerges from this that Joachim's account of logic is, in essentials, identical with that of Hegel. A detailed logic (of which he conspicuously fights shy) would consist for him of a doctrine of categories, regarded however not in Kantian fashion as subjective forms of thinking but rather as constitutive forms of things. It would be indistinguishable from a metaphysics aiming at exhibiting reality as a self-differentiating spiritual system, an intelligible unity in diversity. To attempt any direct criticism of such a conception within the space of a short review would obviously be absurd. But it is perhaps pertinent, in view of the context in which all this is put forward, to ask what Joachim made of the actual achievements of formal logic in his own day. On this subject he is disappointingly silent. In principle, of course, he must condemn the whole idea of a formal logic: logic proper is, in a sense carefully explained (p. 12), a concrete philosophical study, whereas formal logic is the most abstract of all the special sciences. That logic is, or could be, a special science in any sense, whether that of the formal logicians or of Bradley, was a thesis to which Joachim was irrevocably opposed. But the awkward fact is that, as Miss Stebbing remarked long ago, formal logic has moved on a good deal since 1883, and this advance must be acknowledged by idealist philosophers as well as others. It seems clear that, if the idealist conception of logic is to be revived, some place must be found within it for logic considered as a formal study, and some account must be given of the status of the principles of such a logic in the "concrete" thinking with which idealists propose to supplement it. But this is a task not even attempted in the present book.

The remaining two parts of the work, though considerably longer, can be treated rather more briefly, since their essential purpose is to defend the position already stated against criticism, mainly of the sort put forward by realists some twenty years ago. Part II, entitled "The Search for a Datum", deals convincingly with the claim that, because some features of reality can be objects of knowledge in and for themselves, logic cannot be the study of reality as a coherent system. The claim is in fact that there are some experiences which are immediate and self-contained, and this thesis is examined and rejected with successive reference to (i) sense-perception

(material-object statements); (ii) sensation proper (sense-datum statements); (iii) sentience or feeling (introspection), and (iv) intellectual intuition. A tantalising appendix (pp. 171-178) argues that there are states in which "experience is whole and undivided, and so far, perhaps, 'genuinely immediate'" (p. 175), e.g., when a scientific observer loses himself in the contemplation of his facts, or when the solution of a baffling problem suddenly flashes on the mind of a thinker who has been struggling with it. But Joachim maintains that such states, though perfectly real, cannot be used to overthrow his theory. They are not basic data on which all knowledge rests, fundamental truths to which analysis must come back, but rather the result and culmination of discursive thinking. There is a good deal in this part of the book to interest philosophers who are out of sympathy with Joachim's general position. The long and careful discussion of basic judgments of sense and feeling should certainly not be missed.

Part III, "What is it that is true or false?", consists of a somewhat ill-balanced discussion of the unit of thought, a subject Joachim connects with the general question of truth. Three views are considered. The first, typified by Locke and Aristotle in the *de Interpretatione*, makes the subjective act of judging central, judgment consisting in the union of ideas. This is refuted by a reaffirmation of Bradley's distinction between two senses of the word "idea". With it goes the correspondence theory of truth, since "to adopt the subjective position . . . is to be committed in principle to the view of truth as correspondence in one form or another—and it is at least doubtful whether it is possible to conceive truth as correspondence except within the outlines of that position" (pp. 230-231). All this is argued at length, at the expense of space for consideration of the second view, that the unit of thought is the proposition, conceived as an entity existing or subsisting in its own right. Here we look hopefully for detailed criticism of the logic of Moore and Russell, but find instead no more than notes on two leading difficulties in it, which add little to Joachim's previous remarks in *The Nature of Truth*. Perhaps it was realisation of the inadequacy of this section which caused him to refrain from publishing *Logical Studies* himself. The work closes with an exposition of Joachim's own idealist position, that the unit of thought is judgment, but that judgment must not be taken to mean what goes on in any particular person's mind. This is connected with the Coherence theory, on whose shortcomings Joachim is now somewhat less severe than he was in his earlier work. The old difficulties about error remain, but we are now assured that some apparent cases of it (e.g., the stock example that Charles I died in his bed) are "not examples of judgment at all" (p. 274) (since no sane person would hold such a belief); and again, that the problem of error passes into, and is part of, the more general and ultimate problem of how reality can (and indeed must) appear as the experiences of a plurality of finite subjects—a problem which we cannot hope to solve in detail, but (despite Bradley) can see to be soluble in principle. Error thus remains a difficulty for the Coherence theory, but is no longer said to lead to its "shipwreck". The shift of emphasis here displayed can perhaps be taken as indicating a certain movement in Joachim's thought from the sceptical position of Bradley to the more confident idealism of Hegel; though it is noticeable that he was already acknowledging Hegel as his chief inspiration in the preface to *The Nature of Truth*.

It cannot be pretended that the book makes easy reading. Not only are its doctrines difficult in themselves and unfamiliar to a generation

brought up in a very different tradition; they are expressed in sentences which are often long and heavy, and in an idiom which sometimes strikes a modern reader as foreign and remote. But it would be a pity if these factors led to its neglect. It is true that there is much here that is already available in a more palatable form in Blanshard's *Nature of Thought*, a work which has the advantage over Joachim's in relating its positive doctrines to comparatively recent philosophical developments. Even so, *Logical Studies* remains well worth reading as the careful expression, by a very able thinker, of a set of views whose importance ought to be acknowledged even by those who disagree with them, and whose outlines at least should be familiar to all students of philosophy. Incidentally, Joachim provides a striking refutation of the thesis that it is impossible to combine interest in questions of philosophical scholarship with independent philosophical ability: historical disquisitions, often marked by considerable learning, are a prominent feature of his work; and so far from hindering the search for conclusions which can stand on their own merits, they are in every case turned to philosophical account.

W. H. WALSH.

La Logique de Théophraste. By I. M. BOCHENSKI, O.P. (Collectanea Friburgensia, Nouvelle Série, Fascicule 32) Librairie de l'Université, Fribourg en Suisse, 1947. Pp. 138. Fr. 15.

THIS book was written in 1937 for the series *Collectanea Logica*, edited by Professor Lukasiewicz. It had already been printed when the war came, but the printed sheets and the original manuscript were both destroyed during the bombardment of Warsaw in 1939. The only complete set of proofs that survived was sent by the author to Professor Scholz of Münster, who published two short reports about it in the *Journal of Symbolic Logic*. Towards the end of the war this copy also was destroyed during a raid on Münster by Allied bombers. Meanwhile Father Bochenski had escaped from Poland, and the present edition of his book is reconstructed from an incomplete set of proofs which he found in Rome when he reached that city with the victorious Polish forces. It is dedicated to the memory of Father Salamucha, another Polish historian of logic, who was taken to the Sachsenhausen-Oranienburg concentration camp, together with his colleagues of the University of Cracow, and then murdered during the Warsaw rising of 1944.

At the end of his book Father Bochenski gives a list of his conclusions (including some he has adopted from other writers), each with a mark, "A", "B" or "C", to indicate the degree of reliability he attaches to it and a reference or references to his text. The last entry reads as follows: "41. De M. J. Lukasiewicz: l'œuvre de Prantl ne présente, quant aux jugements, presque aucune valeur scientifique [A] (*passim*)."

This excellent remark indicates the spirit of the whole. When they were both able to live and work in Poland, Father Bochenski learnt from Professor Lukasiewicz the need for a complete rewriting of the history of logic, and he has already made some useful contributions towards this desirable result, in particular a paper in *Angelicum* (1938) on the mediæval theory of *consequentiae* and a new edition (1947) of the *Summulae Logicales* of Peter of Spain. His latest publication continues the good work. Much more will be required before some heroic scholar of the future can write

a history of logic on the scale of Prantl's *Geschichte der Logik im Abendlande*. But if international affairs allow philosophical scholars to continue their interesting and harmless labours, we may hope that the whole ground will be covered by separate studies in the course of the next few generations. And, unlike Prantl, our new historians of logic may be inspired, as Father Bochenski is, by a liking for logic.

There exists only one fragment, or possible fragment, of Theophrastus's work on logic that has come down to us directly. This is a papyrus from Oxyrhynchus, now preserved at Florence, which may be a piece of his book on *Topics*, but it does not seem to have much value. For the rest we are dependent on references by other authors. They are arranged by Father Bochenski in the following order of merit: (1) relatively safe: Alexander, Simplicius; (2) less exact, but not suspect: Galen, Diogenes Laertius, Boethius; (3) suspect: Apuleius, Ammonius, Philoponus and later writers. From these sources it is possible to reconstruct in outline some of Theophrastus's work. The main headings under which Father Bochenski considers it are: his treatise *On Affirmation*, his theory of the assertoric syllogism, his logic of modality, and his doctrine of hypothetical syllogisms. The book is furnished with an ample apparatus of footnotes (containing the passages discussed) and with all necessary indices.

The treatise *On Affirmation* seems to have dealt with the same subjects as Aristotle's *De Interpretatione*. One of the most interesting novelties introduced here by Theophrastus was the doctrine that there might be quantification (*προσδιορισμός*) of a proposition in respect of a term other than the subject, e.g., "Phanias does not possess all knowledge". Father Bochenski suggests that Theophrastus may have been feeling his way towards a theory of multiply general propositions. This is well said, but Father Bochenski's discussion of the next important item, Theophrastus's theory of propositions *κατὰ πρόσληψιν*, seems to me less satisfactory. The word "*πρόσληψις*" means introduction of a third term, and the question is that discussed by Aristotle in his *Prior Analytics*, I, 41. According to Alexander in his commentary on the *Prior Analytics*, p. 379,

ὁ μέντοι Θεόφραστος ἐν τῷ Περὶ καταφάσεως τὴν "καθ' οὗ τὸ B, τὸ A" ὡς ἴσον δυναμένην λαμβάνει τῇ "καθ' οὗ παντὸς τὸ B, κατ' ἐκείνου παντὸς τὸ A."

Father Bochenski supposes this to mean that Theophrastus taught the equivalence of certain formulæ with and without universal quantifiers, namely of

$$(1) C\phi x\psi x$$

and

$$(2) C\Pi x\phi x\Pi x\psi x$$

in the symbolism of Professor Lukasiewicz, or of

$$(1') \phi x \supset \psi x$$

and

$$(2') (x) . \phi x . \supset . (x) . \psi x$$

in the symbolism of Whitehead and Russell. Surely what Theophrastus asserted was rather the equivalence of

$$(i) (x) . \phi x \supset \psi x$$

and

$$(ii) (x) . \theta x \supset \phi x : \supset : (x) . \theta x \supset \psi x.$$

In either case it was, of course, a mistake to assert an equivalence where there is only a one-way entailment, but I do not see how (2) or (2') can be taken as a correct rendering of "καθ' οὗ παντὸς τὸ B, κατ' ἐκείνου παντὸς τὸ A."

In his chapter on the assertoric syllogism Father Bochenski attributes to Theophrastus the recognition of the five indirect moods of the first figure and the thesis that all three of the Aristotelian figures are "perfect" as they stand. There is not much here to be added to the commonly received tradition.

On the other hand, Father Bochenski's account of Theophrastus's views on modal propositions contains much that will interest a modern logician. As might be expected from one who has studied with Professor Lukasiewicz, he treats this subject in an extremely careful and thorough fashion. It is well known that Theophrastus simplified the theory of modal syllogisms by introducing the rule that the conclusion must have the same modality as the weaker of the premisses, but Father Bochenski maintains that Theophrastus also simplified the general theory of modality by basing it on the notion of pure possibility (i.e. the contradictory of impossibility) instead of on the Aristotelian notion of possibility as including also contingency, and he succeeds in making a good case for this view from consideration of the fragments. Unfortunately Theophrastus was not entirely consistent in his usage (perhaps because he did not realise exactly what he was doing) and therefore fell into some errors that Aristotle had avoided.

Boethius, who contributed more than any other writer of antiquity to the amalgamation of Aristotelian and Stoic doctrine in what we call traditional logic, ascribes the discovery of hypothetical syllogisms to Theophrastus. But it is not entirely clear what this discovery amounted to. Prantl was almost certainly wrong in supposing that Theophrastus formulated the five *ἀναπόδεικτοι* which became the basis of the Stoic calculus of propositions. Probably Father Bochenski is right in thinking that his chief contribution was a rather unsystematic account of "totally hypothetical syllogisms". This part of his doctrine is explained by Alexander with examples, and it seems to be a kind of half-way house between the Aristotelian theory of categorical syllogisms and the Stoic analysis of hypothetical reasoning. If the explanation given by Alexander follows the text of Theophrastus closely, we must assume that the latter was still thinking about the relations of terms, although his formulæ could be interpreted with a slight alteration as theses in the calculus of propositions. It is also interesting to notice that according to Alexander he used inference schemata in the presentation of his doctrine. Father Bochenski sees here another reason for treating him as a precursor of the Stoics.

Our sources of information are not sufficiently detailed for us to reconstruct the development of logic at this period with certainty, but I am inclined to think that the treatment of hypothetical arguments attributed to Chrysippus may be derived from discussions which started in the Megarian school even before the time of Aristotle. The debates of Diodorus and Philo, reported by Sextus Empiricus, suggest at least a lively interest in hypothetical statements among the members of that school, and it would be natural enough for the followers of Parmenides and Zeno to begin the formal examination of hypothetical reasoning. As for their ability, the philosophers who invented the Liar and six other famous paradoxes were surely capable of making such a contribution to logic. That Theophrastus was interested in their work we can see from the fact that he wrote three books about the paradoxes. Whether he dealt with these any more satisfactorily than his master Aristotle we cannot say, since nothing survives of this part of his work.

It cannot be expected that Father Bochenski's book will attract a great

many readers. For the subject matter is somewhat forbidding, and his treatment is made rather difficult by free use of Professor Lukasiewicz's symbolism, which is still unfamiliar to most logicians. But the work is undoubtedly a valuable study in the history of ideas and will probably remain for a long time the chief modern authority on the logic of Theophrastus.

WILLIAM KNEALE.

Les Fondements Psycho-Linguistiques des Mathématiques. Par GERRET MANNOURY, professeur émérite de l'Université d'Amsterdam. Bibliothèque Scientifique, Neuchâtel, 1947. Pp. 63.

THIS essay was issued at the request of the publishers of *Dialectica* and *Synthese* on the occasion of the author's eightieth birthday. It appeared originally in German under the title "Die Signifischen Grundlagen der Mathematik" (*Erkenntnis*, vol. 4, 1934) and in it the author does not only give a compact statement of the aims of psycho-linguistics (or, following V. Welby in *MIND*, 1896, p. 24, of "signifies"), but he also attempts to apply them to mathematics. Accordingly, the essay is divided into two parts, and indeed there is no doubt that these are more independent than a reader may expect to find within the compass of a small volume.

As regards the method itself, its explanation requires a vocabulary which, though it exists in Dutch, French and German, is not yet fully established in English. *Psycho-linguistics* (*Psycho-linguistique*, *Signifik*), then, studies acts of communication (*Actes de communication*, *Sprachakte*), a term which is intended to cover the spoken and written word, as well as gestures and such physical actions as are used by human being to influence each other's activities. It also studies the associations which relate such acts with the mental processes which occur in the minds of the parties concerned. These associations are referred to as representing the *significance* (*Signification*, *Bedeutung*) of such acts.—What, then, is the main purpose of this study? To this question the author has several answers:

- (i) "... la première des tâches de la psycho-linguistique consiste à bien distinguer les complexes psychiques qui s'associent à un acte de communication donné et à en déterminer le degré de subjectivité" (p. 14).
- (ii) "... la tâche primordiale de la psycho-linguistique réside dans l'examen, non seulement des petites et des grandes questions que la vie nous pose, mais aussi dans celui, de tous les actes de communication de notre activité quotidienne et scientifique" (p. 32).
- (iii) "... que la tâche primordiale de la psycho-linguistique était la détermination des éléments de signification indicatifs et émotifs (ou volitifs)" (p. 33).

Of these, one may perhaps choose the first as being the most satisfactory, whereas the second must certainly be dismissed as too all-embracing.

Within the framework thus established (para. 1), certain fundamental distinctions can be made. In the first place (para. 2), an act of communication is said to contain *indicative and emotional elements* (*Éléments indicatifs et éléments émotifs*, *indikative und emotionelle Bedeutungselemente*), which have already been introduced in (iii) above. The former term refers to associations between memories of events and objects

of the external world, where as the latter refers to human feelings. Furthermore, degrees of language are distinguished (para. 3) such that the words of one degree can be explained in terms of those of the preceding degree until a set of *basic words* (Mots fondamentaux, Grundwörter) are arrived at, though these are, in general, neither clearly defined nor sharply distinguished from the other degrees of language. These two points, on combination, lead one naturally (para. 4) to a distinction between the "Self" and the "It" Terminology (Terminologie du moi actuel et terminologie de la chose, Ich-jetzt Terminologie und Es-Terminologie).

It is a matter of great regret that the author devotes as many as seven pages of Part I (pp. 24-30) to the explanation of his "formalisation of psychological terminology" (para. 4) which is hardly used again and the usefulness of which is not altogether clear. After eight pages of exposition of method (pp. 13-21) a reader wants to learn its advantages by seeing it applied to several simple problems. However, little space (p. 22) is devoted to this topic, the problem of the purpose of the world being regarded as meaningless since the term "purpose" implies the "self" terminology whereas "world" belongs to the "it" terminology. The only other helpful remark which bears on the application of the method is the statement (p. 20) that the psycho-linguistic point of view does not allow one to answer a question such as "What is a number?" without having ascertained first the purpose of the question; is it intended to trace back one degree of language to a preceding degree, or is it intended to examine the associations which link the word to our mental images? Nevertheless, several other simple applications of the method may be found in Part II (paras. 6-9, pp. 33-56). For instance, it is pointed out (p. 53) that the question "Is the number of fixed stars infinite?" is not of a physical nature, as no experiments whatsoever would justify an affirmative answer.

The application of these ideas to mathematics raises well-defined questions:

- (a) What is the purpose which inspires mathematical work?
- (b) To what extent do "mathematical acts of communication" attempt to influence the behaviour of other mathematicians, and to what extent is the work an end in itself?
- (c) What is the relation between mathematical symbolism and mathematical thought?

To the English-speaking reader who is interested in the wider aspects of (a) and (b) one can strongly recommend a perusal of the late Prof. G. H. Hardy's "A Mathematician's Apology" (Cambridge, 1940), and indeed the two volumes have several points of contact. Mannoury does not advance even to an explicit formulation of (b) and (c), but his comment on (a) is concise (pp. 33-34):

"On n'a recours aux formules mathématiques que lorsqu'elles peuvent servir à la description d'une constatation . . . Le but de cette application est déterminé à ce moment-là non par la formule elle-même, mais par le rapport de l'acteur avec l'objet de ses spéculations."

Hardy, too, speaks of the motives for research and cites (p. 19) intellectual curiosity, professional pride, and ambition, and his defence of these is as honest as it is eloquent.

Problem (b) which is so strongly suggested by the author's definitions (i) and (iii) is, however, hardly discussed by him. Actually, it raises a

whole complex of questions. In a paper a mathematician desires on the one hand to establish for his results a lasting place in the body of mathematical knowledge, and he desires to induce other mathematicians to build on and around his work. In this respect his paper is a "manifestation volitif" (Mannoury, p. 14). On the other hand, the completion of an elegant argument or the establishment of a new and significant result is satisfying by itself. From this point of view the paper is a "manifestation indicatif". As Hardy says (p. 25):

"The mathematician's patterns, like the painter's or the poet's, must be *beautiful* . . . there is no permanent place in the world for ugly mathematics."

Turning to problem (c), the author has some remarks to make (pp. 47-48) concerning the analogy between the commutative law of addition and the linguistic use of the conjunction "and". Again, one may advance a little further, and, to illustrate the type of analysis we have in mind, consider two sets of elements, A and B, either identical or different. Then one of the most fundamental class of operations of mathematics is that which associates mentally, and by a definite procedure, with any element a_i of A a set of elements b_{jk} ($k = 1, 2, \dots$) of B. The mental operation so performed is fundamental to the concepts of homomorphism and isomorphism and to the algebraic operations "+" and ".". One may, as an example, cite the integers. Here, with any two elements, 3 and 4 say, two more elements $3 + 4, 3 \cdot 4$ may be associated by definite mental processes. The two operations derive their usefulness from the circumstance that the new elements, 7 and 12 in our case, are again elements of the set of integers. Or, we may put this in a different way and say that the concept of integers derives its usefulness from the fact that it is possible to define in the set such "closed" operations + and . (an operation which associates with any element of A a definite element, or set of elements, of A is said to be closed with respect to A). The above example shows that more than one operation may be defined in, and closed with respect to, a set A. The only criterion which allows us to assert that the two methods are distinct, is the fact that one operation in a particular case yielded the element 7, the other the element 12. It is indeed possible to imagine distinct mental processes of association which always yield identical results. Mathematicians are not interested in distinguishing such processes, and express this preference by the use of a unique symbol to denote them all. Their real interest lies therefore in the results rather than the processes themselves, and they define two processes as distinct if, and only if, they yield different elements on at least one occasion.

After reading this book one is left with the feeling that the interesting method which has been put forward has not been tested fairly by looking for the clarification it may be able to produce upon application to definite problems. If the method is to justify its existence, another volume is called for in which such applications are attempted.

PETER LANDSBERG.

The Existence of God. By Dom MARK PONTIFEX. London: Longmans, Green and Co. Pp. xv + 181. 1947. 7s. 6d.

THE sub-title of this book is 'a Thomist essay'. It is not, the author tells us, an historical account of what St. Thomas taught, but 'an attempt

to explain the living system of Thomism' from his own point of view. This is a recommendation. There are already too many orthodox expositions of Thomism, none of them, since the appearance of Garridou-Lagrange's treatise, any the better for being newer.

The first striking feature of this book is its reduction of the Thomist proofs for the existence of God from five to two: (a) an argument from 'the fact that something exists which changes'; (b) an argument from 'the fact that something exists'. While Dom Mark Pontifex does not follow M. Fernand van Steenberghe in criticising the traditional proofs, his approach has several points in common with that of the articles which have recently appeared in the *Revue Philosophique de Louvain*. M. Steenberghe says in so many words that St. Thomas's deduction of the attributes of God is a more convincing metaphysical account of His existence than the Five Ways; Dom Mark Pontifex, in giving most of his attention to God's attributes and summarily condensing the *quinque viae*, may be thought to be of the same opinion.

A further novelty in this book is its treatment of the problem of evil. Traditionally the Thomist holds that God permits sin *ante praevisa demerita*; it is here suggested that God permits sin *post praevisa demerita*. It should be added that Dom Mark Pontifex uses the word 'post' to refer to a logical and not temporal order, so that his view is not quite so unorthodox as it seems at first look. The point emerges most prominently in his chapter on free-will. Free-will for him is a problem not simply, as it is for the non-Christian philosopher, of reconciling human freedom with the principle of natural causation, but of reconciling human freedom with the omnipotence and omniscience of God. The question Dom Mark Pontifex puts to himself is this (p. 64): "if a man is entirely dependent on God, must not God be entirely responsible for man's action and choice?" He answers it by maintaining that while God is the first cause of all that is positive in man, man's failure is "the negative cause of the lesser actuation" on God's part. "A negative priority of the creature over God in causation", he writes, "is not contradictory because God sees from eternity the limitations of the creature's nature and of its free choice and of the whole of its conduct. God freely permits this negative priority and actuates the creature accordingly . . . God permits the negative priority willingly because without it man could not have an intellectual nature or the chance of perfect happiness."

The difficulty with this kind of philosophising is to distinguish any clear meaning in the terms and premisses. What, for instance, is a 'negative cause'? It seems that Dom Mark Pontifex has in mind the sort of cause which is the cause of another (potential) cause being inoperative. If this is the case, the word 'negative' will not serve. Surely such a cause is better described by some such term as 'inhibitive'? Again, what are the grounds for saying that free-will is necessary for perfect happiness? It is at least conceivable that a creature might be all the happier for being without the burden and responsibility of choice.

Free-will is, of course, important in the Thomist system in accounting for one sort of evil in the universe: moral evil or sin. Because "a creature must be built up from imperfection to perfection" (p. 73), it is said to follow that he may prefer the satisfaction of the moment to ultimate satisfaction, and thus, being free, do other than that which God wishes. Here one may ask: why should God (who is good) make men in such a way that they find even momentary satisfaction in evil? The only answer

I can see is that the overcoming of evil is itself the highest moral good, in which case we may say that God has arranged for men to be tempted in order that they may have the opportunity of resisting temptation. I do not think Dom Mark Pontifex would be willing to say this, because the notion carries with it the corollary that God Himself deliberately introduced evil into the universe.

A yet greater problem for the Thomist is presented by the existence of the sort of evil which *cannot* be explained as sin. Suffering in animals is an example of this. It is to the credit of Dom Mark Pontifex that he does not, like so many Christian moralists, minimise the extent of non-moral evil in the world. He does not pretend, for instance, that animals don't feel pain. But he does say (p. 164): "in this matter of animal suffering it should always be remembered how much we are in the dark as to the character of their pain, lacking as they do an intellectual nature". Is this to the point? Babies, too, lack "an intellectual nature" in the sense that they cannot talk, yet we never doubt that they feel pain, nor are we altogether "in the dark" as to the character of it. Dom Mark Pontifex claims that the non-moral defects in the world are inevitable if we are to have the good.

This proposition, I confess, baffles me. Does it mean that God could not make good things unless He also made evil things? If so, God is not omnipotent. Or does it mean that we mortals could not appreciate the good things unless there were bad things with which to compare them? But this is tantamount to saying that we must eat bad food in order to appreciate good, read bad poetry in order to appreciate good poetry, and so on. All I think we are entitled to say in this connexion is that variations in merit are necessary for value judgments to become significant; certainly nothing need be positively evil.

Dom Mark Pontifex is even less satisfactory in his treatment of causality. He refers (p. 44) to 'the principle that the effect must be like the cause'. What is this principle? Is a cold in the head, for instance, like a draught under the door? Are most supposed effects like their supposed causes? I should say that a very large number are not. But it would be unfair to challenge the author further on the question of causality, since he has very little to say about it, and is evidently at pains not to over-simplify the problem.

It is this discretion on the part of Dom Mark Pontifex which, coupled with a pleasing academic humility, gives his book its singular quality. It is a good book, written for the most part in clear, ordered prose, with none of the fancy-work in the way of abstruse allusions and interminable foot-notes which often passes for scholarship in this kind of writing. After I had read it I recalled a conversation I once had with a leading Jesuit philosopher. I asked him what criteria he employed in judging philosophical theories. He replied: "Intrinsic consistency—and, let me be honest, the extrinsic canon of Catholic theology". It is to my mind a particular merit in Dom Mark Pontifex's argument that he is here almost wholly concerned with "intrinsic consistency", and leans only in weaker moments on the "extrinsic canon".

MAURICE CRANSTON.

The Spirit of Chinese Philosophy. By FUNG YU-LAN, translated by E. R. HUGHES. London: Kegan Paul, Trench, Trubner & Co. Ltd., 1947. Pp. xiv + 224. 15s.

DR. FUNG is Professor of Philosophy in Tsinghua University and one of China's outstanding philosophers. He has lectured in Europe and America and has written the standard history of Chinese philosophy.¹ Recent Chinese philosophies have mostly reproduced Occidental thought.² Fung continues Chinese traditions by attempting to bring up to date medieval Neo-Confucianism. His thought is expounded in a series of four books, of which the present one is the third (Chinese publication date, 1945).

Fung states that his philosophy "is the inheritor from every point of view of the best traditions in Chinese philosophy" (p. 204). The great Chinese philosophies, from Confucius to sixteenth-century Neo-Confucianism, are discussed *seriatim*, with the criticism each one makes of its predecessors. He does not, like many Chinese and most Occidental expositors, make Confucius teach medieval Neo-Confucian doctrine. Instead he carefully distinguishes one thinker from another, criticising them in turn.

Occidental readers of Chinese philosophy, if they do not read Chinese, are often led to think that these philosophers ignored one another, for Occidental interpreters often each use different translations for Chinese terms, so that the filiation of Chinese thought is lost. In this volume, Fung demonstrates that Chinese philosophy, like Occidental thought, developed by mutual criticism and that there was a progress in Chinese thinking. He moreover shows how Buddhist philosophy was taken over by the Chinese, developed in a Chinese manner, and influenced both Confucianism and Daoism.

This work, unfortunately, was written for Chinese who are familiar with these philosophies, not for Occidentals. Fung consequently takes for granted a thorough knowledge of Chinese thought, such as that found in his *History of Chinese Philosophy*, and his argument is not always clear without such a knowledge. The ordinary reader, it is feared, will find this volume difficult. It is, however, required reading for those who think that there has been no development or change in Chinese thought throughout the ages or that Chinese philosophy is unsophisticated and can be stated simply in a few pages.

Fung's discussion of Chinese philosophic development is not above criticism. He gives far too little place to Mo-dz, who was as important as Confucius and had great influence even upon Neo-Confucianism. Cheng Hao's dictum, "One who is full of love is indifferently one with all things" (1779) actually echoes Mo-dz's thesis that one should love all beings equally and was intended to carry that moral connotation as well as a metaphysical one. Mencius, who had condemned Mo-dz, became, however, the sole orthodox interpreter of Confucius, so that Fung is unable to do justice to Mo-dz and over-values Mencius. He likewise makes too much of the *Book of Changes* and the *Doctrine of the Mean*—two ancient works that became

¹ Fung Yu-lan, *Jung-gue Je-hsüeh-shzh*, 2 vols., 1934, translated by D. Bodde, as *The History of Chinese Philosophy*, of which the first volume has appeared, published by Vetch, Peiping, 1937.

² Cf. the reviewer's "Recent Chinese Philosophy", in the *Philosophical Review*, May, 1939, and W. T. Chan, "Philosophies of China", in *Twentieth Century Philosophy*, New York.

classical and authoritative for Neo-Confucianism but are actually second-rate in their philosophy and contain little new of permanent value.

An interesting point is raised when Fung attributes to Confucius a feeling of oughtness or absolute obligation. Here I disagree with the translator, who implies that such a concept should not be attributed to Confucius (12, n. 1). While it is true that Confucius did not reach the logical distinction between hypothetical and categorical imperatives, yet the concept of duty or unconditional obligation (which is all that Fung asserts) is a necessary consequence from the religious belief in a personal, good, and purposive supreme God. Fung correctly states that Confucius possessed this fundamental religious faith (23). It is not difficult to demonstrate that Confucius actually felt the command of duty, even though he had no explicit word for it. Sün-dz's influence later induced Confucianism to deny a personal Heaven (*i.e.*, a supreme God) and adopt instead an impersonal, hylozoistic and purposive Heaven. Nevertheless this philosophy retained the notion of duty and obligation. Fung is quite correct in attributing it to Confucius. He is, however, in error in refusing to impute it also to Mo-dz, whom he calls a mere utilitarian. For Mo-dz likewise accepted a supreme personal purposive God and patently manifested a sense of duty. Mo-dz used his utilitarianism merely to give concrete content to his abstract moral ideal of love for all, and does not take it as the primary sanction for morality.

The philosophical position reached by Fung is interesting. Throughout Chinese philosophy, he seeks for transcendence of the actual, avoidance of pictorial thought and attainment of the purely abstract, living in the transcendent sphere, which he sums up in the ancient phrase, "attainment to the sphere of the abstract and ferrying over to the beyond". Consequently, instead of seeking a concrete universal, Fung, in the spirit of Daoist mysticism, reaches four purely formal and empty (*kung*) concepts (pp. 205-212): (1) There are real classes, each constituted by its law (*li*), which is itself logically prior to its class. The totality of these laws constitutes the Supreme (*Tai-ji*). (2) There are also potentialities of existence (*chi*). In itself, such a potentiality is non-being (*wu-ji*). (3) Existence is the process in which non-being (*wu-ji* or potentialities) actualise the ubiquitousness of the Supreme (*Tai-ji*), which process Fung calls "the Evolution of Reality (*Dao-ti*)".¹ (4) The sum total of beings is the Great Whole (*Da-tsüan*), which may be called the Universe or the one, a formal unity. These four propositions are all analytical, hence are necessarily true of everything (209). Law and potentialities are logically prior to things. The Evolution of Reality and the Great Whole are all-inclusive realities that cannot be literally thought or comprehended. Philosophy does not give men positive knowledge of the actual or practical ability, but exalts their sphere of living and enables men to become "ferried over the beyond" (whatever this pictorial phrase means), while yet not divorced from actual utility (218, 219). This philosophy Fung asserts is "at least an opening of a new road in metaphysical thinking" (205).

The terms *li*, *chi*, *wu-ji*, *Tai-ji*, *Dao* are important Neo-Confucian concepts. But the affinities of this philosophy, as Fung notes (217), are with mystical Zen Buddhism and Wang Shou-ren's mystical Neo-Confucianism, while its logical foundations are from the Occident. Confucianism has,

¹ Hughes translates this phrase on p. 209 as "the Evolution of the *Tao*" and on p. 23 as merely "the *Tao*". He writes *Tao* for my *Dao*; the latter spelling is closer to the Chinese pronunciation.

however, always stressed the moral life. Fung, by relegating morality to a lower sphere, has passed out of the Confucian stream.

The translation, by the former Reader in Chinese at Oxford University, is, in the main, skilful and good. It has had careful and extensive revision by Fung himself, so that it is authoritative. Where the necessities of expounding a difficult Chinese text make Fung inevitably prolix, Hughes properly condenses the translation, even at times omitting several sentences with advantage. Important Chinese terms are indicated by transliteration—a very useful practice. Not all difficulties were, however, cleared up between author and translator. For example, Fung plainly states that Confucius' cardinal virtue of *ren*¹ means love (37, 38, 39), but Hughes translates *ren* as "human-heartedness", as he does in his other translations. There are some errors in proof-reading² and in the crediting of notes.³ There are occasional errors in translation.⁴ The translation in the main is, however, excellent.

HOMER H. DUBS.

Plato's Theory of Education. By R. C. LODGE. (Int. Library of Psychology Philosophy and Scientific Method.) London: Kegan Paul, Trench, Trubner & Co. Ltd., 1947. Pp. viii + 322. 18s.

PROFESSOR LODGE's book is written primarily for students of educational theory, but is intended also for the student of Plato and for the general reader interested in 'the life of the mind'. Amongst other topics it discusses Plato's views on Vocational and Technical Education, Education for the Professions, for Citizenship, for Leadership, Teachers and Teaching, The Pupils and Learning, etc. There is an appendix by Dr. S. Frank on 'Education of Women according to Plato'. Tribute must be paid at the outset to Professor Lodge's wide and detailed knowledge of Plato's writings—a knowledge which will already be familiar to those acquainted with his earlier book on Plato's Theory of Ethics. Each chapter in the present book is documented with references not only to the *Republic* and *Laws*, but to the whole range of Plato's writings; and one must be grateful for the reminder that Plato had things of importance to say on education in other places besides these two well-known sources.

In an interesting introductory chapter Professor Lodge takes the view that 'Plato's own philosophic attitude is . . . essentially comparative', that in the dialogues it is not positions but individuals who are refuted, and that, for Plato, as for Socrates, no single alternative position is 'final'. Clearly then it is no easy task to present a general picture of 'Plato's theory of education'. The danger is that the result may be (to use a phrase

¹ Hughes spells this term as *jen*. Its pronunciation is closer to *ren*.

² On p. 35, line 39, "Ting" should be "T'ang" and on p. 146, line 35, *ching* should be *cheng*.

³ Note 2, p. 89 and n. 1, p. 92 should be credited to Fung, not to Hughes.

⁴ The sentence on lines 14, 15, p. 84 should read, "But they really did not agree with Lao-tzu and Chuang-tzu". The last sentence on p. 178 omits an important qualification, and should read: "The man whose mind is united with Heaven, although what he does belongs to the moral realm, yet the intent of what he does transcends the moral realm, consequently the sphere in which he lives transcends the moral sphere".

employed by Professor Lodge in the Introduction to his earlier book on Plato's Theory of Ethics) too much 'loosed from the original contexts of the particular dialogues'. I am not clear, bearing in mind the class of reader for whom the book is primarily intended, that the present work altogether escapes this danger. To take an instance, in the chapter on Subject-matter—Composition, where the revision of the traditional Greek literature is being discussed, Professor Lodge writes: 'The revision will bring out, in rhythmic patterns which get under the skin of ordinary bio-social humanity, the ideal message of the Divine Leader, God's plan for the guidance of men, women, and children, as they make their way through the phases of the human life-cycle on this earthly planet. It will guide and lead them toward the life-giving vision of the realm which lies beyond this visible world: the Plain of Truth, the realm of values which is the eternal source of whatever in human ways of living is worth while.' The references quoted on this include, besides passages in the *Laws*, others in the *Phædo*, *Phædrus*, *Republic* (509a, b and 531 ff.), and *Symposium*. The passage must, of course, be read in the light of the earlier chapter on Education for Leadership, where it is explained (perhaps too strongly) that 'as far as training for the higher life of leadership is concerned, art is of no use whatever' (p. 94). But even so one is afraid that the class of reader the author has primarily in mind may come away with wrong or confused impressions which do not accurately reflect what Plato was actually saying in any precise context.

The student of Plato will be interested in the discussion of the mathematical sciences, particularly in their relation to dialectic, in the chapter on Education for Leadership. The author quotes *Rep.* 533 as still referring to 'Pythagorean science', and not to the pure mathematics, etc., which Plato wants. It is by dialectic that pure mathematics, etc., are studied—page 96, and cf. the paraphrase on page 99 of *Rep.* 529d, ff. (the ref. 629d quoted is a misprint). He will also find interest in the contention developed in the chapter on Association and Imitation that 'education in Plato's *Dialogues*, from beginning to end—from its beginning in music and gymnastic to its end in philosophy and administration—involves *imitation* in the sense of imaginative self-projection into the next highest rung of the ladder of advancement'.

The chapter on 'Education and Democracy: Plato and the Moderns' is of general interest. It contains a vigorous defence of Plato against modern criticism, though it is open to question whether the method of defence, which seems to some extent to depend on the blurring of real differences between Plato and modern views, is altogether satisfactory.

The style in parts of the book may offend some readers—e.g. page 142, 'This extracurricular teaching in schools which deal with sports and accompanied song-and-dance activities is cued to the monthly sports-meets and music festivals, in which . . .', or again on page 168, 'In their great hero Socrates we have concrete proof that goodness is not necessarily either sissified or dull'. There are some misprints, particularly in the early part of the book. There is a generous bibliography, and the book is well indexed.

R. C. CROSS.

Exclusion Principle and Quantum Mechanics. By WOLFGANG PAULI. Neuchâtel, Switzerland: Editions du Griffon. 1947. Pp. 52. Price 3.80 Swiss francs.

AMONG the famous mathematical physicists of the present century, one of the greatest is Pauli, although his name is perhaps less familiar to philosophers than are the names of the founders of quantum mechanics: Heisenberg, Dirac and Schrödinger. Most of Pauli's writings are to be found only in specialist journals and are highly technical. It is, therefore, doubly welcome that, on the occasion of receiving the Nobel prize for physics for 1945, Pauli was obliged to deliver a lecture of a somewhat less abstruse character, and that this has now been published.

The theme of Pauli's address is, of course, the great principle which will forever be associated with his name. Although originally formulated early in 1925 shortly before, and independently of, the advent of the new quantum mechanics, the two have been intimately associated ever since. Nevertheless, the Exclusion Principle occupies a peculiar and isolated position in atomic theory. The main principles of the new mechanics followed rapidly, as soon as Heisenberg had formulated his celebrated procedure for confining attention, as far as possible, to "observables". Pauli's principle, however, appeared as an arbitrary additional hypothesis, adequate for "saving the appearances", but difficult to justify in theory.

Unfortunately, although Pauli's Stockholm lecture is in English and is almost completely devoid of mathematical symbols, it is not easy reading. A master of his own tongue, Pauli appears to have some difficulty with ours. Nevertheless, the present lecture will amply repay careful study, not least by philosophers. For Pauli's ideas have played, and will continue to play, a vital rôle in twentieth century natural philosophy.

In this lecture, Pauli sketches the history and ramifications of his famous hypothesis from its origins in the early twenties. Broadly speaking, the Exclusion Principle comprises two distinct features concerning the individuality of electrons and their occurrence in atomic systems: (a) electrons are regarded as intrinsically indistinguishable, and (b) in a given atom, no two electrons can occupy the same "energy level". Once he had formulated these twin ideas, Pauli showed that the detailed structure of the hitherto inexplicable Periodic Table of the Elements could be explained automatically.

Prior to the formulation of the new principle, it had been shown that the satellite electrons in an atom required at least three numbers to specify their "orbits". These numbers, in accordance with quantum (as distinct from classical) ideas, could only take a limited range of discrete values. To complete the picture with the aid of the new principle, it was necessary to introduce a fourth parameter which can assume only two distinct values. Physical significance was soon attached to this new parameter, after Uhlenbeck and Goudsmit had introduced the idea of electron spin, in order to explain the hyper-fine structure of spectral lines.

Subsequent developments were determined by the advent of the new quantum mechanics, wherein it was shown that the wave-functions describing the ensemble of a given number of particles of the same kind, *e.g.*, electrons, are sharply divided into different classes, in particular the so-called symmetrical and anti-symmetrical classes. Pauli found that, in the case of electrons, his principle implied that only the anti-symmetrical class occurs in Nature. But, as he here remarks, "This situation appeared

to me as disappointing in an important respect. Already in my original paper I stressed the circumstance that I was unable to give a logical reason for the exclusion principle or to deduce it from more general assumptions. I had always the feeling and I have it still to-day that this is a deficiency.... The impression that the shadow of some incompleteness fell here on the bright light of success of the new quantum mechanics seems to me unavoidable."

Pauli discusses the problem of the symmetry classes of other fundamental particles and composite nuclei. He shows how this problem too depends on the idea of spin, and points out that this cannot be fully understood without introducing the theory of relativity. The pioneer in developing relativistic quantum mechanics was Dirac, whose theory of the electron appeared in 1928. More recent developments have led to grave mathematical difficulties, particularly when the interaction of the electron with its own electromagnetic field is taken into account. In the concluding pages of his lecture Pauli brings us face to face with present difficulties, remarking that, in his opinion, "a correct theory should neither lead to infinite zero point energies nor to infinite zero charges, that it should not use mathematical tricks to subtract infinities or singularities, nor should it invent a 'hypothetical world' which is only a mathematical fiction before it is able to formulate the correct interpretation of the actual world of physics". In this context, he comments on the need for a theory which will explain the atomistic structure of electricity "which is such an essential quality of all atomic sources of electric fields actually occurring in nature".

To the reviewer, it appears that there are two reasons why this lecture should be commended to the attention of philosophers. First, it states concisely the present point of view of a great theoretical physicist still actively engaged in fundamental research. So often, the views which philosophers imbibe from physicists are as out-of-date as the philosophies which some physicists expound in their spare time. Second, and perhaps more important, the subject matter of this address should be of great interest to those philosophers who are concerned with the problem of individuation in Nature. What is a fundamental particle? If we attribute to such a particle a wave-like or space-pervading property, what becomes of the old idea of "impenetrability"? Pauli's Exclusion Principle now appears to be the final residuum of the commonsense idea that two material objects cannot occupy the same place at the same time. And the bare fact that this axiom has had to be revised is a salutary reminder of the limitations of so-called "self-evident" principles of thought.

G. J. WHITROW.

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VIII.—NOTES.

PHILOSOPHY OF SCIENCE GROUP.

At a meeting held at University College, London, on 1st June, 1948, a Philosophy of Science Group was formally constituted and affiliated with the British Society for the History of Science. The Group adopted the following statement of Aims:

"The purpose of the Group is to study the logic and method of science as well as of the various special sciences, including the social sciences. The main emphasis is upon an approach through the various special sciences to the philosophy of science."

The Group intends to hold meetings for the reading and discussion of papers and to publish an account of its activities in a supplement to the *Bulletin of the British Society for the History of Science*, which will be circulated to members.

Ordinary membership is open to all persons who have been proposed by two members, approved by the Committee and elected at an ordinary meeting.

The Group has elected the following Committee: Professor H. Dingle (Chairman), Dr. K. R. Popper, Dr. F. I. G. Rawlins, Dr. G. J. Whitrow and Dr. A. C. Crombie (Honorary Secretary, Department of History and Philosophy of Science, University College, Gower Street, London, W.C.1. It is hoped to hold the first ordinary meeting in the autumn of this year.

ANNUAL GENERAL MEETING OF THE MIND ASSOCIATION

The 48th Annual General Meeting of the Mind Association was held on Friday, July 9th, 1948, at 5 p.m., in the University Debating Hall, Palace Green, Durham, the President (Professor W. H. T. Barnes) in the Chair.

The Treasurer's report was read and adopted. Professor H. D. Lewis of the University College of Bagnor was elected President of the Association and the retiring President was elected a Vice-President of the Association. The Vice-Presidents were re-elected. Professor G. E. Moore was elected an Honorary Member of the Association. It was announced that the Executive Committee had appointed Mr. Karl Britton of the University College of Swansea to be Hon. Secretary of the Association for a period of three years in the place of Mr. H. L. A. Hart and that the Executive Committee had accepted the invitation of the University College of Bangor to hold the Joint Session of 1949 at Bangor. It was agreed that the Joint Session should be held during the week-end beginning July 8th, 1949. Professor L. J. Russell of the University of Birmingham was nominated by the Association as its representative at the meeting of the International Federation of Philosophical Societies to be convened at Amsterdam in August, 1948.

MIND ASSOCIATION

Those who wish to join the Association should communicate with the Hon. Treasurer, Mr. J. D. MABBOTT, St. John's College, Oxford, to whom the yearly subscription of sixteen shillings should be paid. Cheques should be made payable to the Mind Association, Westminster Bank, Oxford. Members may pay a Life Composition of £16 instead of the annual subscription. The annual subscription may be paid by Banker's Order; forms for this purpose can be obtained from the Hon. Treasurer.

In return for their subscriptions members receive *MIND* gratis and post free, and (if of 3 years' standing) are entitled to buy back numbers of both the Old and the New Series at half-price.

The Hon. Secretary of the Association is MR KARL BRITTON, University College, Swansea.

Members resident in U.S.A. may pay the subscription (\$4) to the Hon. Assistant-Treasurer, Prof. B. Blanshard, Dept. of Phil., Yale University, New Haven, Conn.

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